HP A-IMC Firewall Manager

Configuration Guide

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Overview

Introduction to HP A-IMC Firewall Manager

HP A-IMC Firewall Manager is a powerful system for comprehensive analysis and centralized management of firewall devices. It is an important component of the HP A-Intelligent Management Center (A-IMC).

The Firewall Manager allows you to manage and control all HP firewall devices in your network. It features great scalability, visual realtime event monitoring, comprehensive security event analysis such as attack analysis, and rich reports, enabling you to learn the network security status at any time.

In addition, the Firewall Manager provides the Security Socket Layer (SSL) VPN log auditing function for you to analyze SSL VPN users and monitor firewall devices. SSL VPN is an emerging VPN technology based on HTTPS, and provides a measure of security for remote access to the intranet.

Together with HP firewall devices, the Firewall Manager provides you with visual, all-around, powerful network security protection.

What HP A-IMC Firewall Manager can do

As a powerful, efficient firewall management system, the Firewall Manager supports centralized management and realtime monitoring of firewall devices throughout the network, implements collection and comprehensive analysis of attack event information, enables log auditing, and provides kinds of visual, detailed reports. From the all-around reports, you can see the history security status as well as the security trends of the network easily.

The Firewall Manager presents the following key features:

- Visual realtime monitoring, which can help you detect network attacks in time.
- Perfect comprehensive analysis and rich statistics reports, which can reduce your analysis time.
- Fine log auditing, allowing you to track events.
- Friendly and easy-to-use interface, allowing easy deployment.

Installation and uninstallation

Installing the firewall manager

The software and hardware requirements of the Firewall Manager are as follows:

- Hardware: P4 2.0 CPU or above, 1.5G memory or more, 80G disk or more.
- Operating system: Windows 2003 Server (recommended) or Windows XP, installed with the up-to-date patches.
- Browser: IE 6.0 or above

To install HP A-IMC Firewall Manager, you only need to run the executable file install.exe, which is under the installation directory, and click **Next** repeatedly as prompted.

CAUTION:

After finishing installation, you must restart the operating system.

Registering the firewall manager

In the address bar of the browser, enter **http://localhost/** to open the login page. The default login username and password are **admin** and **admin1** respectively.

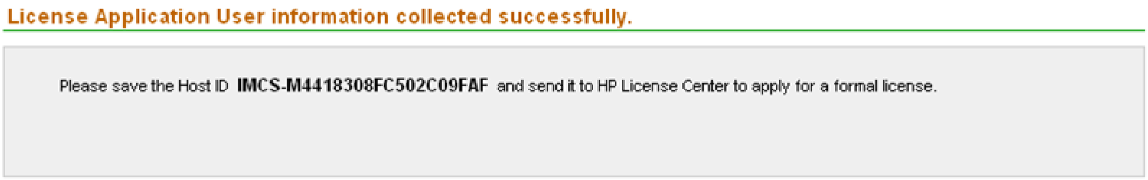
CAUTION:

The last character of the password is digit 1.

When you log in to the Firewall Manager for the first time, you will see the license information page and such a prompt: **You haven't registered. Please register to use the system normally.** You can obtain a formal license, and register your license by following this procedure:

1. From the navigation tree, select **License Application** under **License Management** to enter the license application page. The system automatically generates a host ID for license application, as shown in Figure 1. Perform operations as prompted to obtain a license file.

Figure 1 Generate a host ID

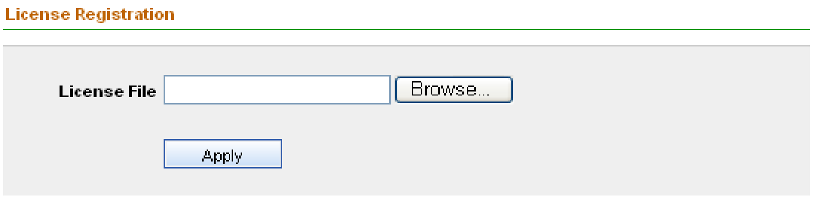


License Application User information collected successfully.

Please save the Host ID **IMCS-M4418308FC502C09FAF** and send it to HP License Center to apply for a formal license.

2. From the navigation tree, select **License Registration** under **License Management** to enter the license registration page, as shown in Figure 2. Click **Browse** to select the license file and then click **Apply** to complete registration. The suffix of a license file is lic.

Figure 2 Register your license


License Registration

License File □ Browse...

Apply

After seeing the acknowledgement page, you can use the Firewall Manager to configure devices and perform other operations.

△ CAUTION:

HP A-IMC Firewall Manager is shipped with a trial license that is effective within one month, which is saved in a license file named **A-IMC Firewall Manager Evaluation License.lic**. Before you get a formal license, you can use the trial license to register.

Uninstalling the firewall manager

To uninstall HP A-IMC Firewall Manager, follow these steps:

1. On the Windows desktop, click **Start** and then select **All Programs** > **Firewall Manager** > **Uninstall Firewall Manager** to enter the uninstall page.
2. Click **Uninstall**, and then click **Next** repeatedly as prompted.
3. Restart the operating system.
4. Remove all files and subdirectories under the Firewall Manager installation directory (C:\Program Files\Firewall Manager, for example) and the installation directory itself, if any.

△ CAUTION:

During the uninstallation process, no system data backup operation is performed and all data is removed. If you need the system data, backup the data before uninstalling the Firewall Manager.

System management

The system management component is mainly used to configure the firewall devices to be managed by the Firewall Manager.

To access the system management component, select the **System Management** tab. Then, you can perform:

- Device management
- Operator management
- System configuration
- License management

The license management function allows you to apply for, register, and view a license. The license mechanism is used for enterprise identity authentication.

Device management

The device management module allows you to perform the following tasks:

- Managing devices
- Managing batch import
- Managing device groups
- Managing events
- Managing device access templates
- Managing the device software database
- Managing deployment tasks

Managing devices

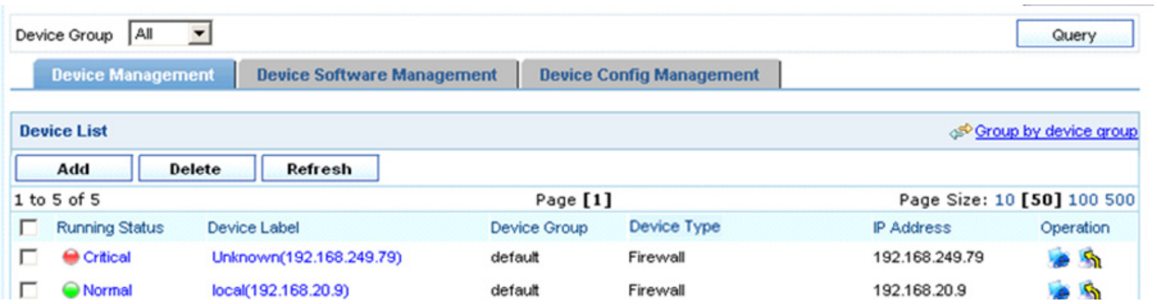
Device management

After completing device group and template configuration, you can add devices to be managed. Only after you add devices to the system component successfully, can you add the devices to the firewall component to collect statistics on and analyze attack information. The device management page allows you to add and delete devices. The device list shows the details of all managed devices, and provides the links for you to export configurations and connect to the devices through web or Telnet.

1. Configuration guide

From the navigation tree of the system management component, select **Device List** under **Device Management**. The device management page appears, showing the basic information of all devices added successfully to the Firewall Manager.

Figure 3 Device management page



Device Group [All ▼] Query

Device Management | Device Software Management | Device Config Management

Device List — Group by device group

Add | Delete | Refresh

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	Running Status	Device Label	Device Group	Device Type	IP Address	Operation
□	● Critical	Unknown(192.168.249.79)	default	Firewall	192.168.249.79	
□	● Normal	local(192.168.20.9)	default	Firewall	192.168.20.9	

Table 1 Device management functions

Function	Description
Device list	Allows you to view details about devices, export configurations, and connect to the devices through web or Telnet.
Adding a device	Allows you to add devices to be managed.
Deleting devices	Allows you to delete devices from the list of managed devices. Follow these steps: 1. Select the check boxes before the devices to be deleted. 2. Click **Delete**.
Refreshing device information	Allows you to obtain the up-to-date device information.

2. Device list

From the navigation tree of the system management component, select **Device List** under **Device Management**. The device management page appears, as shown in Figure 3. Table 3 describes the fields of the device list.

Table 2 Device query option

Option	Description
Device Group	Select a device group to list all devices in the device group.

Table 3 Fields of the device list

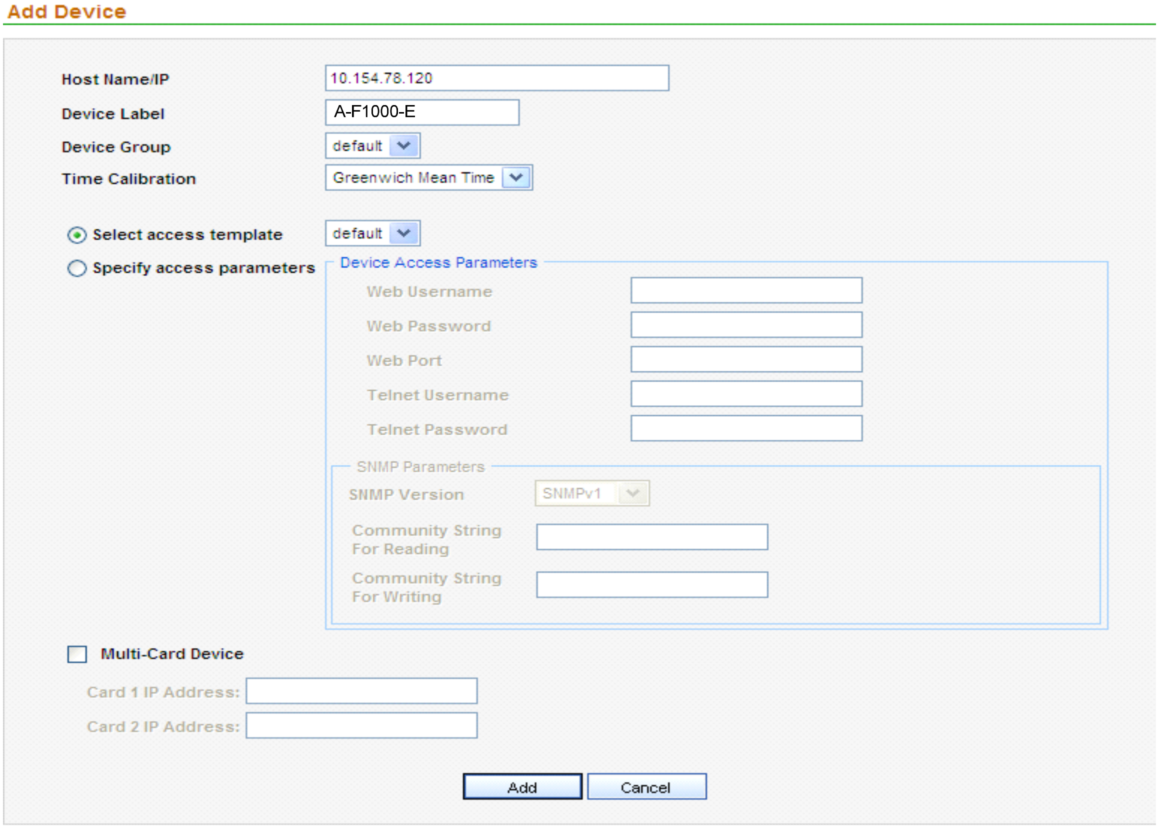
Field	Description
Running Status	Status of the device. You can click the link to view the event list of the device. For more information, see "Managing events."
Device Label	Name and IP address of the device. You can click the link to view the details of the device and modify the relevant information. For more information, see "Device information."
Device Group	Device group to which the device belongs
Device Model	Model of the device
IP Address	IP address of the device
Operation	• Click the icon of a device to open the web console for the device. • Click the icon of a device to telnet to the device.

Return to Device management functions.

3. Adding a device

From the navigation tree of the system management component, select **Device List** under **Device Management**. The device management page appears, as shown in Figure 3. Then, click **Add** to add a device, as shown in Figure 4 and Table 4.

Figure 4 Add a device



Add Device

Host Name/IP: 10.154.78.120

Device Label: A-F1000-E

Device Group: default

Time Calibration: Greenwich Mean Time

● Select access template: default

○ Specify access parameters

Device Access Parameters

Web Username:

Web Password:

Web Port:

Telnet Username:

Telnet Password:

SNMP Parameters

SNMP Version: SNMPv1

Community String For Reading:

Community String For Writing:

□ Multi-Card Device

Card 1 IP Address:

Card 2 IP Address:

Table 4 Device configuration items

Item	Description
Host Name/IP	Required Type the name or IP address of the device to uniquely identify the device in the system.
Device Label	Required Type a label for the device, which can be used as an alias of the device. The device label can comprise up to 20 characters.
Device Group	Select a device group for the device. By default, the device group named **default** is selected.
Time Calibration	Required Select a time mode for the device.
Select access template Specify access parameters	Required. Select either of them. If you select **Select access template**, select a template from the following drop-down list. By default, the template named **default** is selected.

	If you select **Specify access parameters**, specify the access parameters, including **Web Username**, **Web Password**, **Web Port**, **Telnet Username**, **Telnet Password**, **SNMP Version**, **Community String for Reading**, and **Community String for Writing**.
Web Username	Required Specify the username for managing the device through web. The username can comprise up to 20 characters.
Web Password	Required Specify the password for managing the device through web. The strength of the password must meet the password strength requirements of the device.
Web Port	Optional Specify the port of the device to be connected with the network. The port number must be an integer in the range from 0 to 65535.
Telnet Username	Optional Specify the username for telneting to the device. The username can comprise up to 20 characters.
Telnet Password	Optional Specify the password for telneting to the device. IMPORTANT: The strength of the password must meet the password strength requirements of the device.
SNMP Version	Required Select an SNMP version, which can be SNMPv1, SNMPv2, or SNMPv3.
Community String for Reading	Required Specify the SNMP read community string to be used for communication with the device. The string can comprise up to 20 characters.
Community String for Writing	Required Specify the SNMP write community string to be used for communication with the device. The string can comprise up to 20 characters.
Authentication Username	Required for SNMPv3 Specify the authentication username to be used for communication with the device.
Authentication Protocol	Required for SNMPv3 Specify the authentication protocol to be used for communication with the device.

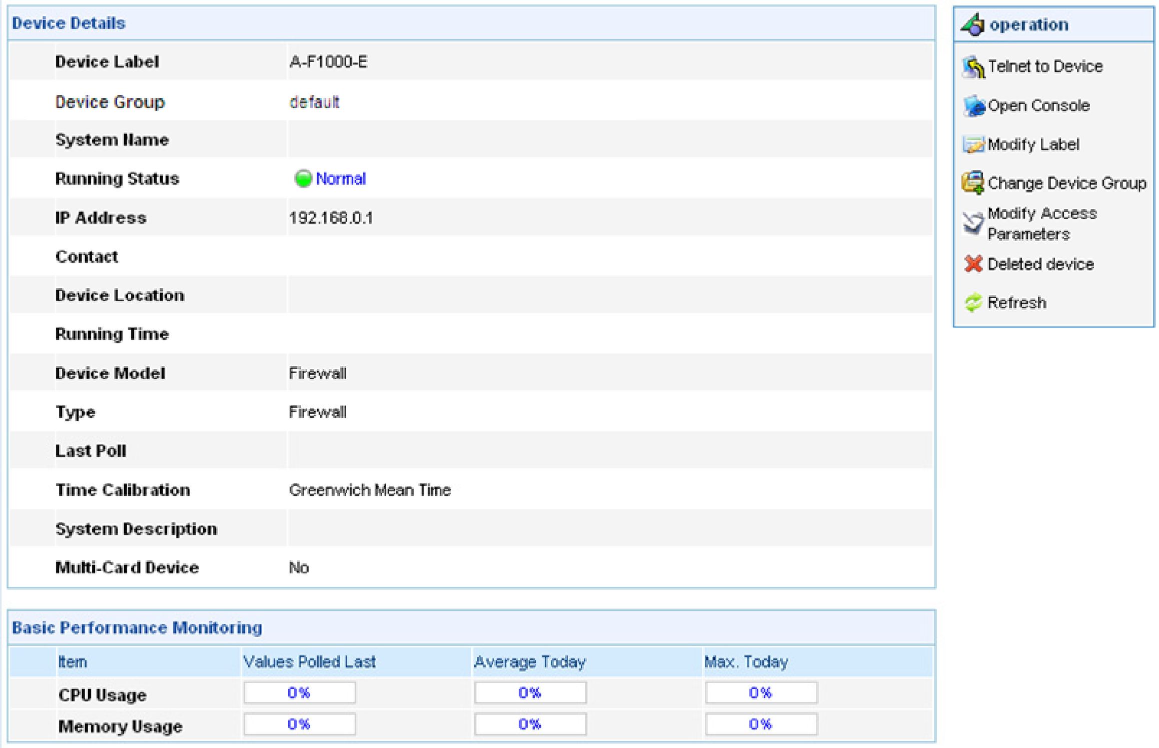
Password	Required when you select the authentication protocol **HMAC-MD5** or **SMAC-SHA**. Specify the authentication password to be used for communication with the device.
Encryption Protocol	Required when you select the authentication protocol **HMAC-MD5** or **SMAC-SHA**. Specify the encryption protocol to be used for communication with the device.
Password	Required when you select the encryption protocol **CBS-DES** or **AES-128**. Specify the encryption password to be used for communication with the device.
Multi-Card Device	Optional Configure the cards in the device. IMPORTANT: • You can specify the card 1 IP address, card 2 IP address, or both. • The input IP address must be in the dotted decimal notation, such as 192.168.0.35.

Return to Device management functions.

4. Device information

From the navigation tree of the system management component, select **Device List** under **Device Management**. The device management page appears, as shown in Figure 3. Then, you can click the device label link of a device to display the details of the device and modify the information of the device, as shown in Figure 5.

Figure 5 Device information



Device Details

Device Label	A-F1000-E
Device Group	default
System Name	
Running Status	● Normal
IP Address	192.168.0.1
Contact	
Device Location	
Running Time	
Device Model	Firewall
Type	Firewall
Last Poll	
Time Calibration	Greenwich Mean Time
System Description	
Multi-Card Device	No

Basic Performance Monitoring

Item	Values Polled Last	Average Today	Max. Today
CPU Usage	0%	0%	0%
Memory Usage	0%	0%	0%

Device software management

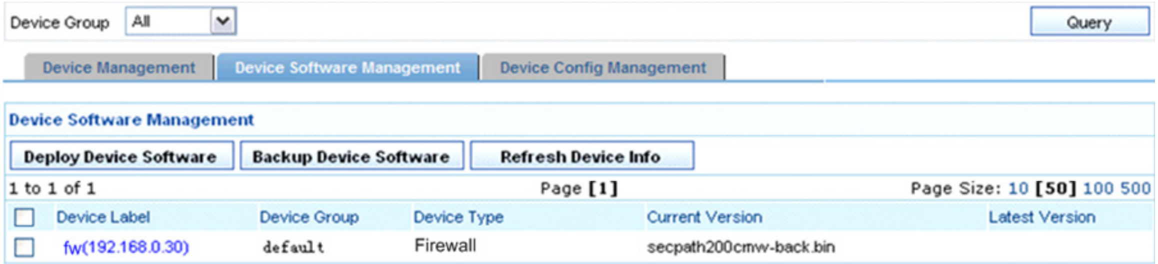
Device software refers to the software that a firewall device runs to provide services. It can be regarded as the operating system of the device.

The device software management function provides you with the software information of the firewall devices and allows you to perform a series of operations to the software of firewall devices, including deploying software to devices and backing up the software of devices. The device software list also displays the device type, the current software version, and the latest available new software version.

1. Configuration Guide

From the navigation tree of the system management component, select **Device List** under **Device Management**. The device management page appears, as shown in Figure 3. Then, select the **Device Software Management** tab to bring up the device software management page, as shown in Figure 6. Table 5 describes the device software management functions and Table 6 describes the fields of the device software list.

Figure 6 Device software management page



Device Group: All

Device Software Management

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□	Device Label	Device Group	Device Type	Current Version	Latest Version
□	fw(192.168.0.30)	default	Firewall	secpath200cmw-back.bin	

Table 5 Device software management functions

Function	Description
Deploying software to devices	Allows you to deploy software to devices as required.
Backing up the software of devices	Allows you to backup the software of selected devices to the device software database.
Refreshing device information	Allows you to obtain the up-to-date device information.

Table 6 Fields of the device software list

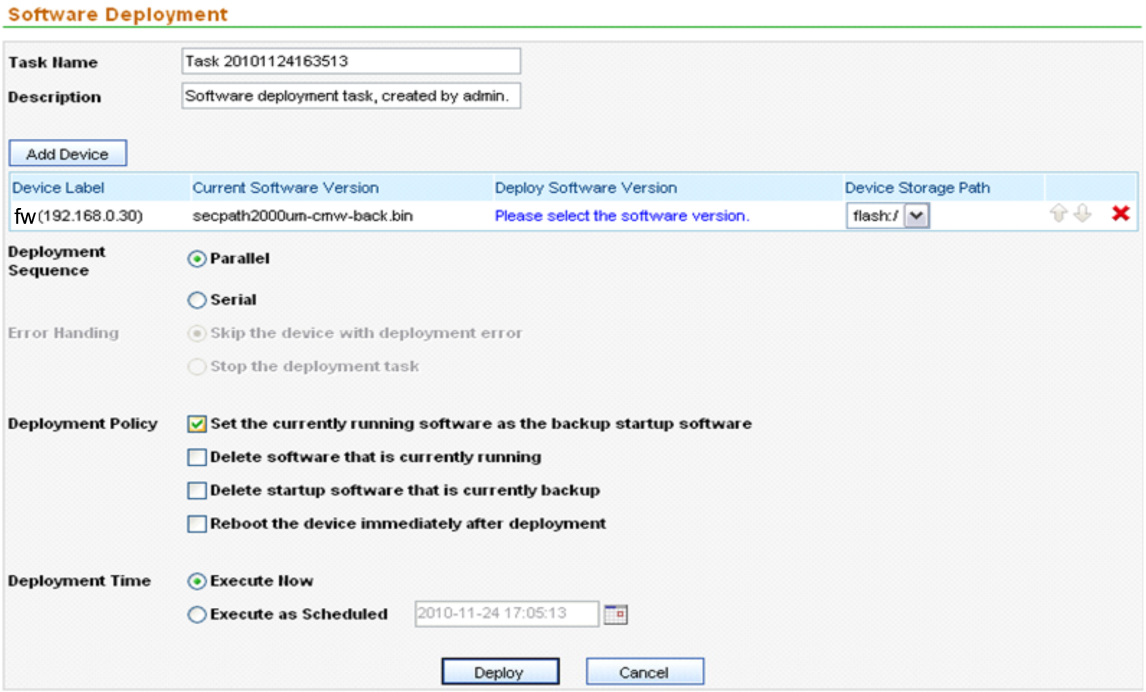
Field	Description
Device Label	Device name and IP address. You can click the link to view details about the device and modify the configuration.
Device Group	Device group to which the device belongs
Device Type	Model of the device
Current Version	Current software version of the device
Latest Version	Latest software version available for the device. This version information comes from the software database.

2. Deploying software to devices

This software deployment function allows you to deploy main boot file to devices. On the device software management page, click **Deploy Device Software** to enter the software deployment page, as shown in Figure 7. Table 7 describes the software deployment configuration items. You can deploy software to multiple devices at a time. You can specify deployment parameters, such as the deployment sequence, policy, time, and error handling mode. A successfully created software deployment task is listed in the deployment task management module.

How many boot files can be stored on a device depends on the device's disk space. Generally, two files, one main boot file and one backup boot file, are stored on the device.

Figure 7 Deploy software to devices



Software Deployment

Task Name: Task 20101124163513

Description: Software deployment task, created by admin.

Device Label	Current Software Version	Deploy Software Version	Device Storage Path
fw(192.168.0.30)	secpath2000um-cmw-back.bin	Please select the software version.	flash:/

Deployment Sequence: ● Parallel ○ Serial

Error Handing: ● Skip the device with deployment error ○ Stop the deployment task

Deployment Policy:
☑ Set the currently running software as the backup startup software
□ Delete software that is currently running
□ Delete startup software that is currently backup
□ Reboot the device immediately after deployment

Deployment Time: ● Execute Now ○ Execute as Scheduled 2010-11-24 17:05:13

Table 7 Software deployment configuration items

Item	Description
Task Name	Required Type the name of the deployment task. By default, it consists of the word Task, a string indicating the current time, and a space in between.
Description	Required Type a description for the task. The description must not contain these characters: ' " < > & % : ; / \
Add Device	Click this button to add a device to which you want to deploy a software version. You can add multiple devices. You can click the ✖ icon of a device to remove it from the list. Select a location from the **Device Storage Path** drop-down list to specify where the software should be saved on the device. Generally, the root directory of the CF card is selected.
Deploy Software Version	Required Click the link in this column to select the software version to be deployed.
Deployment Sequence	Required Select a deployment mode to deploy the software to the devices in parallel

	(**Parallel**) or one by one (**Serial**). When the deployment sequence is serial, the icons ↑↓ are configurable for adjusting the sequence.
Error Handling	Required when the deployment mode is **Serial**. Specify the error handling scheme to be used when a deployment error occurs.
Deployment Policy	Required Select the actions to be taken after deploying the software selected in the **Deploy Software Version** column. • **Set the currently running software as the backup startup software**—Specifies secpath1000fe-cmw520-b5002.bin as the main startup software and the current running software as the backup startup software. • **Delete software that is currently running**—Specifies secpath1000fe-cmw520-b5002.bin as the main startup software and deletes the current running software from the device. • **Delete startup software that is currently backup**—Specifies secpath1000fe-cmw520-b5002.bin as the main startup software, deletes the backup startup software from the device, and leaves the current running software on the device. • **Reboot the device immediately after deploying**—Specifies secpath1000fe-cmw520-b5002.bin as the main startup software, leaves all software files stored on the device, and reboots the device. After the device reboots, secpath1000fe-cmw520-b5002.bin is the current running software of the device.
Deployment Time	Specify the execution time of the deployment task.

NOTE:

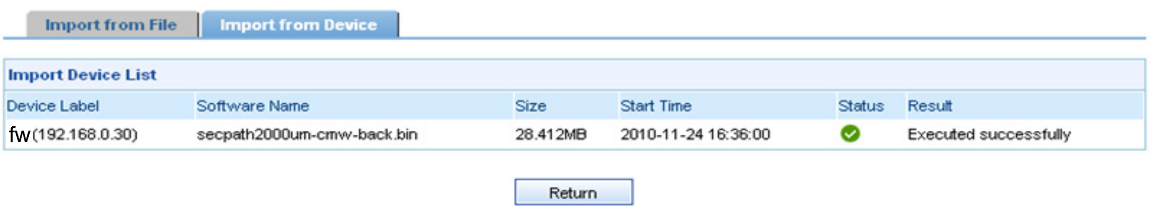
You must select a software version for the **Deploy Software Version** field before deploying software to devices.

Return to Device software management functions.

3. Backing up the software of devices

On the device software management page, select devices and then click **Backup Device Software** to back up the software of the selected devices. The **Import from Device** page appears with the operation results, as shown in Figure 8. Table 8 describes the fields of the software backup result list.

Figure 8 Software backup result



Import Device List

Device Label	Software Name	Size	Start Time	Status	Result
fw(192.168.0.30)	secpath2000um-cmw-back.bin	28.412MB	2010-11-24 16:36:00	✓	Executed successfully

If the backup operation fails, the system shows the reasons. The software backup files are stored in the software database.

Table 8 Fields of the software backup result list

Field	Description
Device Label	Device name and IP address
Software Name	Name of the software backed up
Size	Size of the backup file for the software
Start Time	Start time of the backup operation
Status	Result of the backup operation
Result	Description of the operation result or failure reason

Return to Device software management functions.

Device config management

The device configuration management function allows you to manage configuration files of devices. A configuration file records the configurations users have made on the device. The configuration file is used by the device to filter traffic passing through.

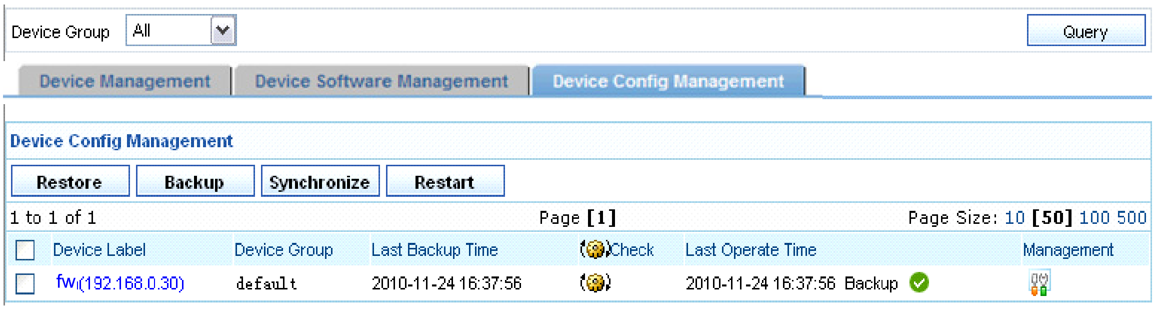
A configuration file can be a startup configuration file or a running configuration file. The startup configuration file refers to the configuration file that a device keeps and will use at next boot. The running configuration file refers to the configuration currently used by a device, which you can save to the device as a file, and once saved, becomes the startup configuration file.

The device configuration management function supports setting baseline versions for devices, managing the running versions and startup versions of devices, and deploying configuration files to devices.

1. Configuration guide

From the navigation tree of the system management component, select **Device List** under **Device Management**. The device management page appears, as shown in Figure 3. Then, select the **Device Config Management** tab to enter the device configuration management page, as shown in Figure 9. Table 9 describes the device configuration management functions and Table 10 describes the fields of the device configuration management list.

Figure 9 Device configuration management page



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□	Device Label	Device Group	Last Backup Time	Check	Last Operate Time	Management
□	fw(192.168.0.30)	default	2010-11-24 16:37:56		2010-11-24 16:37:56 Backup ✓	

Table 9 Device configuration management functions

Function	Description
Backing up configuration files	Allows you to back up the running configuration file and/or the startup configuration file of a device. Backup files are identified by labels and version numbers.
Restoring a configuration file	Allows you to restore the startup and/or backup configuration file of

	a device to another version.
Synchronizing configurations	Allows you to deploy new configuration settings to devices to make them take effect.
Restarting devices	Allows you to restart devices.

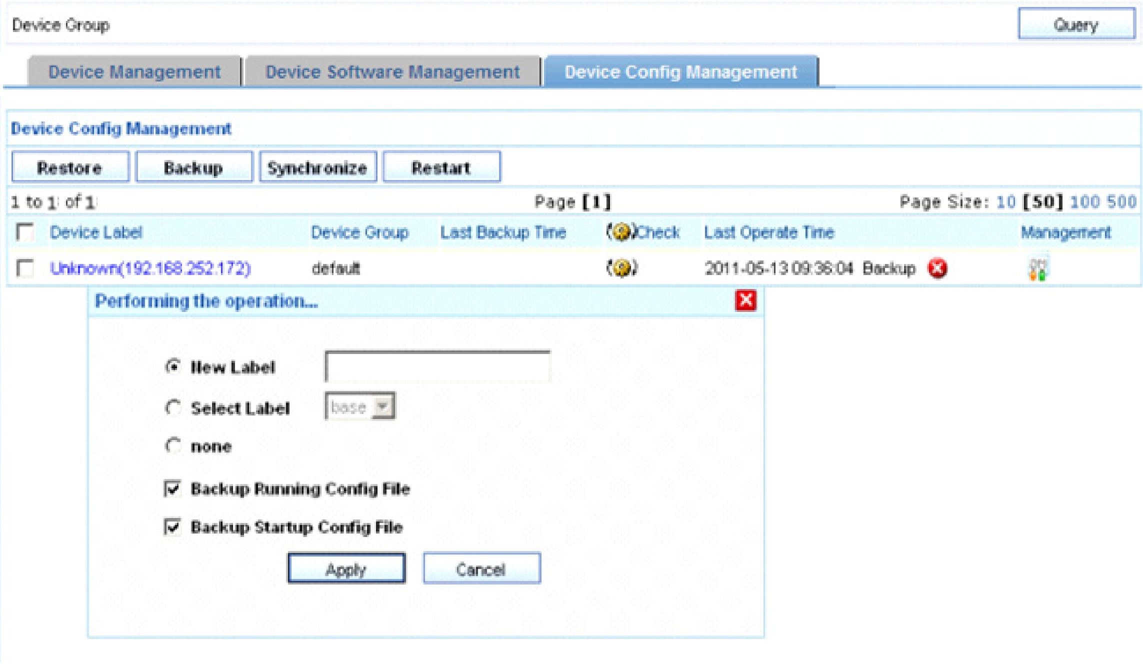
Table 10 Fields of the device configuration management list

Field	Description
Device Label	Device name and IP address. You can click the link to view details about the device and modify the configuration.
Device Group	Device group to which the device belongs
Last Backup Time	Time of the last configuration file backup operation
(◉)Check	Check whether the current configuration of the device is consistent with that last backed up.
Last Operate Time	Time of the last configuration file operation

2. Backing up configuration files

From the navigation tree of the system management component, select **Device List** under **Device Management**. The device management page appears, as shown in Figure 3. Then, select the **Device Config Management** tab to enter the device configuration management page. Select a device by selecting the check box and click **Backup** to bring up the backup configuration page, as shown in Figure 10. A backup file is uniquely identified by a version number that is assigned by the system. After a file is backed up, click the icon in the **Management** column of a device to view the detailed information of the backup configuration files.

Figure 10 Backup configuration files



1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

□	Device Label	Device Group	Last Backup Time	(◉)Check	Last Operate Time	Management
□	Unknown(192.168.252.172)	default		(◉)	2011-05-13 09:36:04 Backup ✖	

● New Label

○ Select Label base

○ none

☑ Backup Running Config File

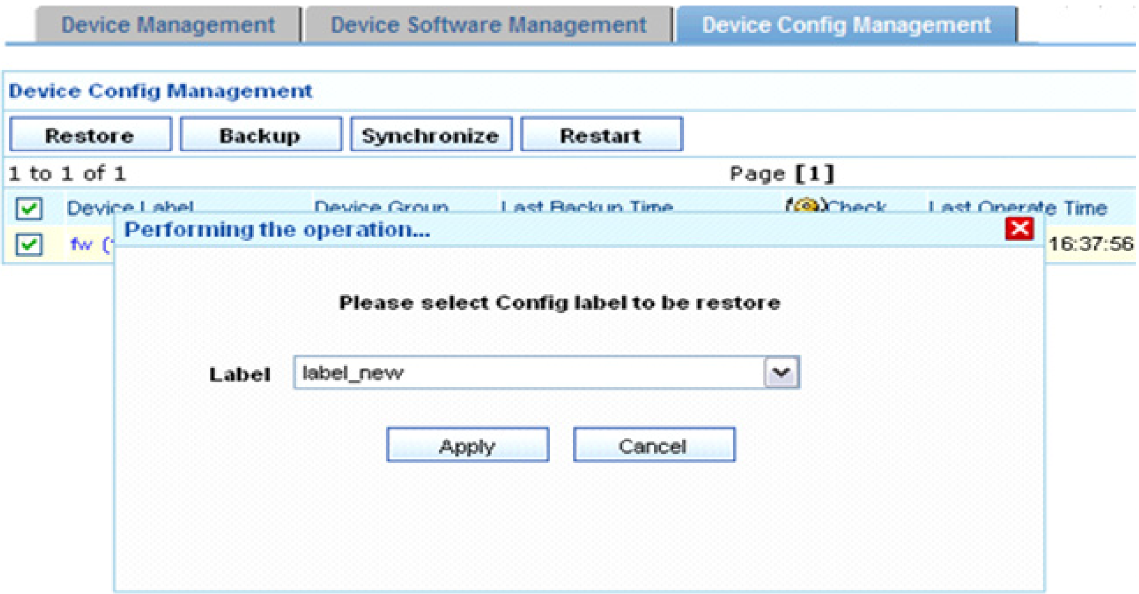
☑ Backup Startup Config File

Return to Device configuration management functions.

3. Restoring a configuration file

From the navigation tree of the system management component, select **Device List** under **Device Management**. The device management page appears, as shown in Figure 3. Then, select the **Device Config Management** tab to enter the device configuration management page, as shown in Figure 9. Select a device and click **Restore** to bring up the restoration configuration page, as shown in Figure 11. Select a startup configuration file and/or running configuration file by their labels and click **Apply** to specify the files as the startup and/or running configuration files for the device.

Figure 11 Restore configuration files



Please select Config label to be restore

Label: label_new

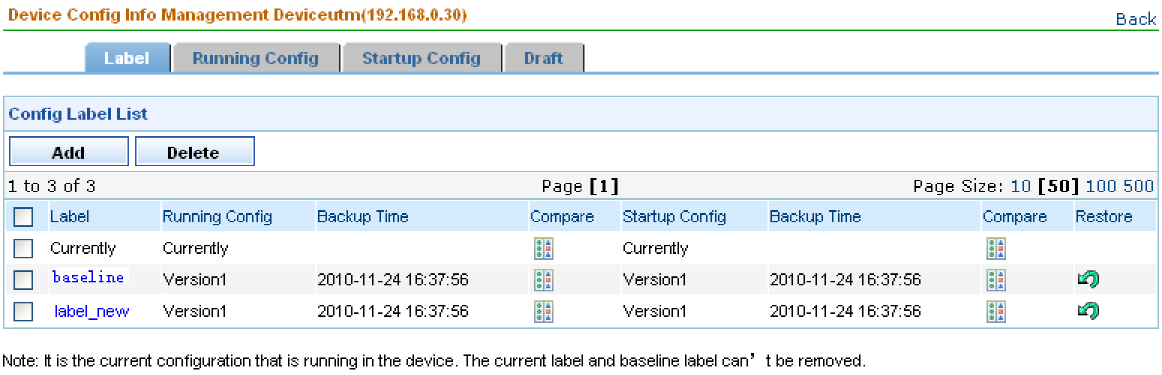
Apply | Cancel

Return to Device configuration management functions.

4. Device configuration information management

On the device configuration management list, you can click the icon in the **Management** column of a device to bring up the configuration information management page of the device, as shown in Figure 12. Table 11 describes the tabs on the device configuration information management page and the functions provided on the tabs.

Figure 12 Device configuration information management interface



Device Config Info Management Deviceutm(192.168.0.30)

1 to 3 of 3 Page [1] Page Size: 10 [50] 100 500

□	Label	Running Config	Backup Time	Compare	Startup Config	Backup Time	Compare	Restore
□	Currently	Currently		▦	Currently		▦	
□	baseline	Version1	2010-11-24 16:37:56	▦	Version1	2010-11-24 16:37:56	▦	↺
□	label_new	Version1	2010-11-24 16:37:56	▦	Version1	2010-11-24 16:37:56	▦	↺

Note: It is the current configuration that is running in the device. The current label and baseline label can’ t be removed.

Table 11 Tabs on the device configuration information management page and functions provided

Tab	Description
Label	A label represents a configuration file of a device. .
Running Config	Allows you to perform operations on running configuration files of different versions.
Startup Config	Allows you to view, back up, and delete the current startup configuration file of a device. The functions are the similar to those for management of running configuration files.
Draft	Allows you to manage drafts for a device.

5. Label

A label is used to indicate the backup running and/or startup configuration files of a device.

On the device configuration management list, you can click the icon in the **Management** column of a device to bring up the configuration information management interface of the device, as shown in Figure 12.

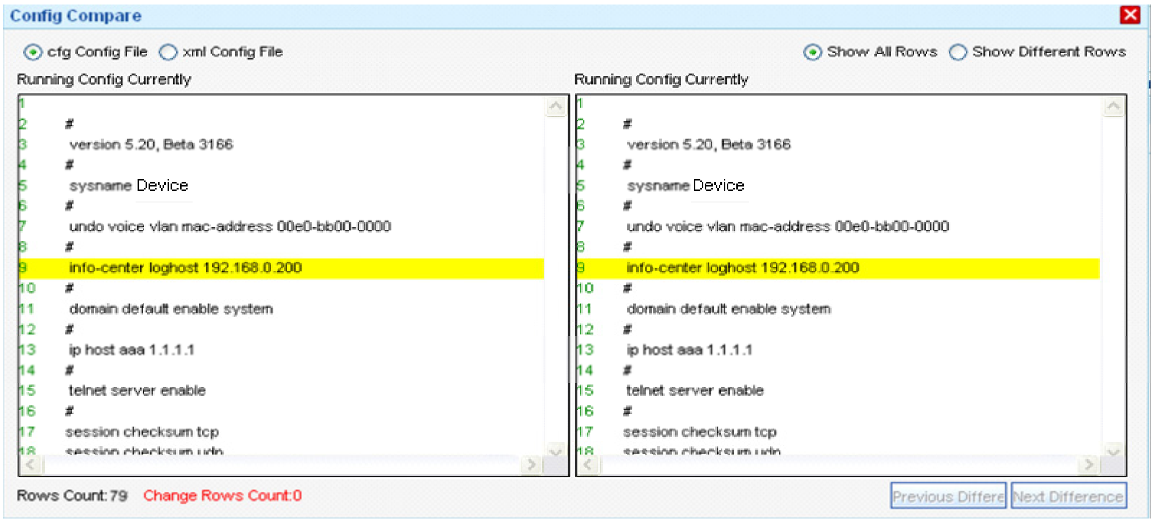
The **Label** tab allows you to:

- Add and delete labels.
- View the information of the backup configuration file, such as version number and backup time. A backup file is uniquely identified by a version number assigned by the system.
- Compare two configuration files to find the differences.
- Click the restoration icon to set the startup configuration file and/or running configuration file of a label as the startup configuration file and/or running configuration file for the device.

Table 12 Fields of the configuration label list

Field	Description
Label	Label of a startup configuration file and/or running configuration file.
Running Config	Version number of the running configuration file associated with the label.
Backup Time	Time when the running configuration file is backed up.
Compare	Allows you to compare two configuration files including the drafts to find the differences. Follow these steps: 3. Click the icon of a file and select **Compare as Left** from the menu to place the file on the left side of the comparison page. 4. Click the icon of another file and select **Compare To** to place the file on the right side of the comparison page, as shown in Figure 13. IMPORTANT: The running configuration file does not support the xml format.
Startup Config	Version number of the startup configuration file associated with the label.
Backup Time	Time when the startup configuration file is backed up.
Restore	Allows you to set the configuration file(s) identified by the label as the startup configuration file and/or running configuration file for the device.

Figure 13 Compare two configuration files


Config Compare
● cfg Config File ○ xml Config File
● Show All Rows ○ Show Different Rows
Previous Differe
Next Difference

Running Config Currently

```

  #
   version 5.20, Beta 3166
  #
   sysname Device
  #
   undo voice vlan mac-address 00e0-bb00-0000
  #
   info-center loghost 192.168.0.200
  #
   domain default enable system
  #
   ip host aaa 1.1.1.1
  #
   telnet server enable
  #
  session checksum tcp
  session checksum udp
```

Running Config Currently

```

  #
   version 5.20, Beta 3166
  #
   sysname Device
  #
   undo voice vlan mac-address 00e0-bb00-0000
  #
   info-center loghost 192.168.0.200
  #
   domain default enable system
  #
   ip host aaa 1.1.1.1
  #
   telnet server enable
  #
  session checksum tcp
  session checksum udp
```

Rows Count: 79 Change Rows Count:0

△ CAUTION:

The label **Currently** indicates the configuration file is currently used by the device and the label **Baseline** indicates the baseline version. Configuration files with any of these labels cannot be deleted.

Return to Tabs on the device configuration information management page and functions provided.

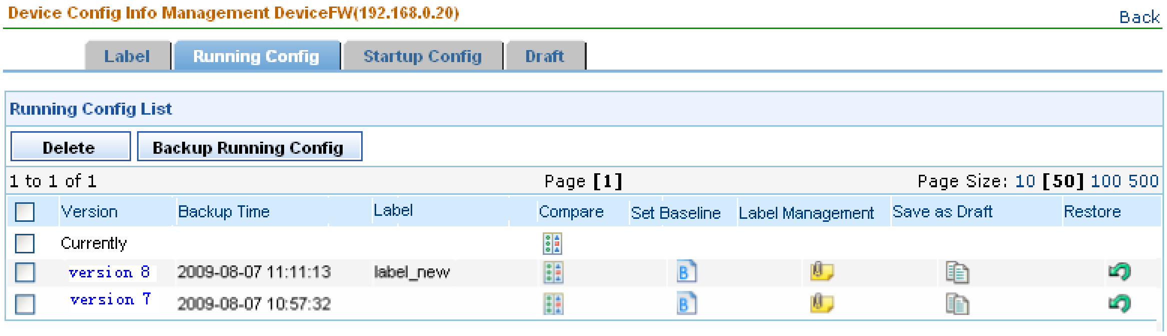
6. Running Config

On the device configuration management list, you can click the icon in the **Management** column of a device to bring up the configuration information management interface of the device, as shown in Figure 12. Then, click the **Running Config** tab to enter the running configuration file management page, as shown in Figure 14.

The **Running Config** tab allows you to:

- View, back up, restore and delete a running configuration file.
- Specify the running configuration as the baseline or save it as a draft.
- Compare two configuration files to find the differences.

Figure 14 Running configuration file list



Device Config Info Management DeviceFW(192.168.0.20)

Running Config List

1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

□	Version	Backup Time	Label	Compare	Set Baseline	Label Management	Save as Draft	Restore
□	Currently			▦				
□	version 8	2009-08-07 11:11:13	label_new	▦	B	✎	▤	↺
□	version 7	2009-08-07 10:57:32		▦	B	✎	▤	↺

Note: It is the current configuration that is running in the device. The current label and baseline label can't be removed.

Table 13 Fields of the running configuration list

Field	Description
Version	Uniquely identifies the running configuration file. The version number is assigned automatically by the system for each backup file.
Backup Time	Time when the running configuration file is backed up.
Label	Label for this version.
Compare	Allows you to compare two configuration files including the drafts to find the differences.
Set Baseline	Allows you to set the running configuration file as the baseline.
Label Management	Allows you to re-label the running configuration file.
Save as Draft	Allows you to save the running configuration file as a draft, and then edit the content of the draft.
Restore	Allows you to set the configuration file identified by the version as the running configuration file for the device.

Return to Tabs on the device configuration information management page and functions provided.

7. Draft

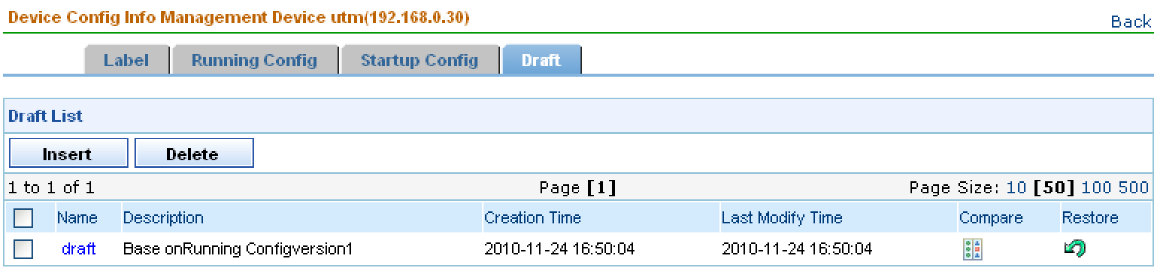
You can save a configuration file as a draft, or create a new draft.

On the device configuration management list, you can click the icon in the **Management** column of a device to bring up the configuration information management interface of the device, as shown in Figure 12. Then, click the **Draft** tab to enter the draft management page, as shown in Figure 15. You can customize a configuration file and apply it to the device.

The **Draft** tab allows you to:

- Edit a configuration file and save it as a draft.
- Add and delete drafts.
- Click the restoration icon to replace the contents of the draft with the current startup or running configuration file.
- Compare a draft with itself, another draft, or any configuration file to find the differences.

Figure 15 Draft list



1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

□	Name	Description	Creation Time	Last Modify Time	Compare	Restore
□	draft	Base onRunning Configversion1	2010-11-24 16:50:04	2010-11-24 16:50:04	▦	↺

Table 14 Fields of the draft list

Field	Description
Name	Name of the draft.

Description	Remarks on the draft.
Creation Time	Time when the draft is created.
Last Modify Time	Last time when the draft is modified.
Compare	Allows you to compare the draft with a configuration file to find the differences.
Restore	Allows you to set the draft as the configuration file for the device. IMPORTANT: Do not set a draft as the startup configuration file.

Return to Tabs on the device configuration information management page and functions provided.

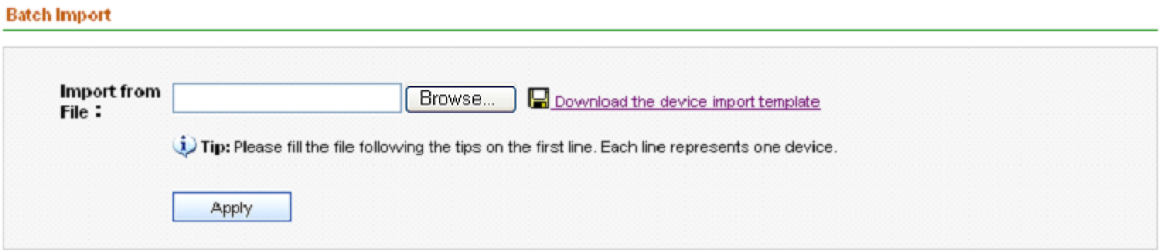
Managing batch import

The batch import function allows you to add devices to the A-IMC Firewall Manager in batches by using a batch import file.

Configuration guide

From the navigation tree of the system management component, select **Batch Import** under **Device Management**. The batch import page appears, as shown in Figure 16. Click **Browse** to select the batch import file, and then click **Apply**.

Figure 16 Batch import of devices



Batch Import

Import from File :

Tip: Please fill the file following the tips on the first line. Each line represents one device.

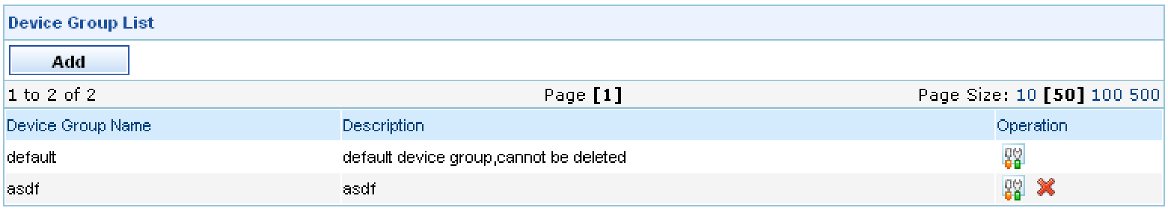
Managing device groups

The device group management function allows you to add, modify, and delete device groups. When you add devices later, you can group devices into device groups so that you can manage and collect statistics on users, devices, and IP addresses by device group.

Configuration guide

From the navigation tree of the system management component, select **Device Group List** under **Device Management**. The device group management page appears, as shown in Figure 17. Table 15 describes the device group management functions.

Figure 17 Device group management page



Device Group List

1 to 2 of 2 Page [1] Page Size: 10 [50] 100 500

Device Group Name	Description	Operation
default	default device group,cannot be deleted	
asdf	asdf	✕

Table 15 Device group management functions

Function	Description
Device group list	Allows you to view details about device groups and modify and delete device groups.
Adding a device group	Allows you to add a device group and configure the device group name and description.

Device group list

From the navigation tree of the system management component, select **Device Group List** under **Device Management**. The device group management page appears, as shown in Figure 17. Details of all device groups are displayed on the page.

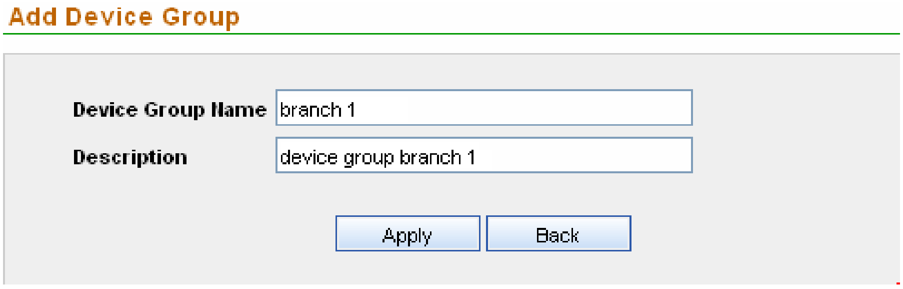
Table 16 Fields of the device group list

Field	Description
Device Group Name	Name of the device group
Description	Description of the device group
Operation	• Click the ✎ icon of a device group to modify the device group. • Click the ✖ icon of a device group to delete the device group.

Return to Device group management functions.

Adding a device group

From the navigation tree of the system management component, select **Device Group List** under **Device Management** to enter the device group management page. Then, click **Add** to add a device group as shown in Figure 18 and Table 17.



Add Device Group

Device Group Name: branch 1

Description: device group branch 1

Figure 18 Add a device group

Table 17 Device group configuration items

Item	Description
Device Group Name	Required Type a name for the device group. The device group name can comprise up to 40 characters and must not contain these characters: " < > ' & % : ; / \

Description	Optional Type a description for the device group. The description can comprise up to 40 characters.

Return to Device group management functions.

Managing events

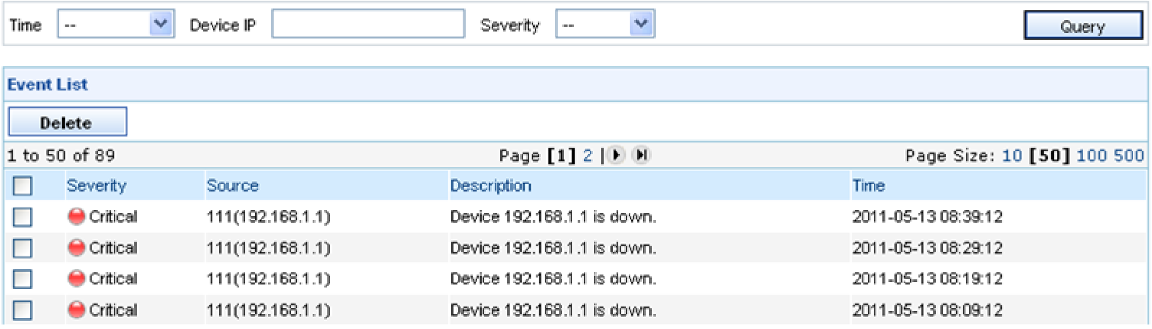
Configuration guide

The event management function records the operations on managed devices and logs the events, allowing you to track the status of devices.

From the navigation tree of the system management component, select **Events** under **Device Management**. The device event list page appears by default, as shown in Figure 19.

Table 18 describes the device management functions.

Figure 19 Device event list page



Time -- Device IP Severity -- Query

Event List

Delete

1 to 50 of 89 Page [1] 2 Page Size: 10 [50] 100 500

□	Severity	Source	Description	Time
□	● Critical	111(192.168.1.1)	Device 192.168.1.1 is down.	2011-05-13 08:39:12
□	● Critical	111(192.168.1.1)	Device 192.168.1.1 is down.	2011-05-13 08:29:12
□	● Critical	111(192.168.1.1)	Device 192.168.1.1 is down.	2011-05-13 08:19:12
□	● Critical	111(192.168.1.1)	Device 192.168.1.1 is down.	2011-05-13 08:09:12

Table 18 Event management functions

Function	Description
Device event list	Allows you to view details about device events.
Device interface event list	Allows you to view details about device interface events.

Device event list

Table 19 describes the device event query options. You can use any combination of the options to query for the device events of interest.

Table 19 Device event query options

Option	Description
Time	Select the time period during which the device events occurred. By default, the value of this option is **--**, which means any time.
Device IP	Type the IP address of the device, in dotted decimal notation.
Severity	Select the severity level of the device events. Severity levels in descending order are critical, major, minor, and warning. By default, the value of this option is **--**, which means all levels.

Table 20 describes the fields of the device event list. You can select the check boxes before events and then click **Delete** to delete the events.

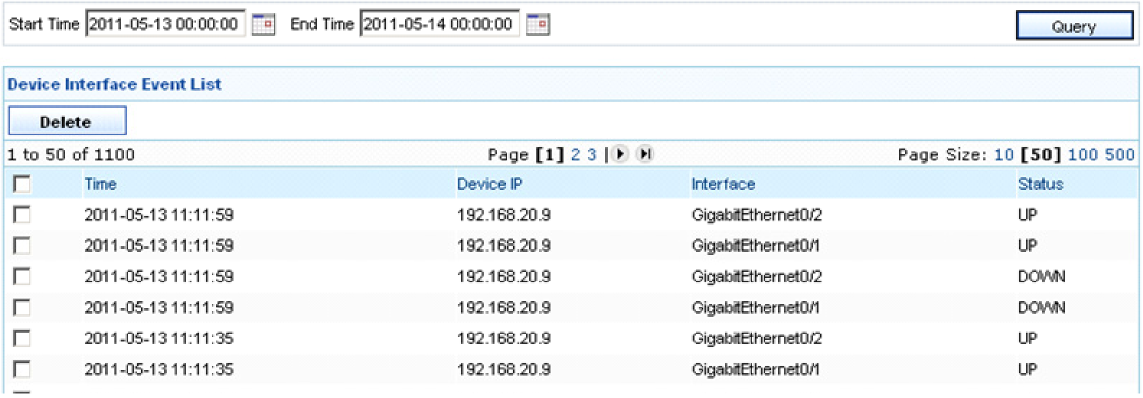
Table 20 Fields of the device event list

Field	Description
Severity	Severity level of the device event
Source	Label and IP address of the device that is the source of the device event
Description	Description of the device event
Time	Time when the device event occurred

Device interface event list

Select the **Device Interface Event List** tab to enter the device interface event list page, as shown in Figure 20.

Figure 20 Device interface event list



Start Time 2011-05-13 00:00:00 End Time 2011-05-14 00:00:00 Query

Device Interface Event List

Delete

1 to 50 of 1100 Page [1] 2 3 Page Size: 10 [50] 100 500

□	Time	Device IP	Interface	Status
□	2011-05-13 11:11:59	192.168.20.9	GigabitEthernet0/2	UP
□	2011-05-13 11:11:59	192.168.20.9	GigabitEthernet0/1	UP
□	2011-05-13 11:11:59	192.168.20.9	GigabitEthernet0/2	DOWN
□	2011-05-13 11:11:59	192.168.20.9	GigabitEthernet0/1	DOWN
□	2011-05-13 11:11:35	192.168.20.9	GigabitEthernet0/2	UP
□	2011-05-13 11:11:35	192.168.20.9	GigabitEthernet0/1	UP

Table 21 describes the event query options. You can use any combination of the options to query for the events of interest.

Table 21 Device interface event query options

Option	Description
Start Time	Select the time period during which the device interface events occurred.
End Time	

Table 22 describes the fields of the device interface event list. You can select the check boxes before events and then click **Delete** to delete the events.

Table 22 Fields of the device interface event list

Field	Description
Time	Time when the device interface event occurred
Device IP	IP address of the device in the device interface event
Interface	Interface in the device interface event
Status	Status of the device interface event

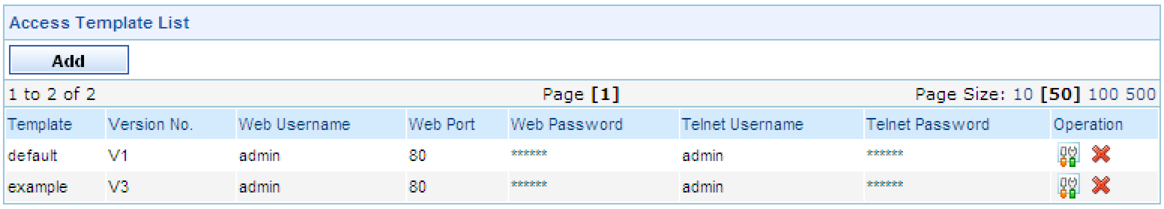
Managing device access templates

The device access template management function allows you to configure information such as the device login password.

Configuration guide

From the navigation tree of the system management component, select **Access Template List** under **Device Management**. The access template management page appears, as shown in Figure 21. Table 23 describes the template management functions.

Figure 21 Access template management page



Access Template List

1 to 2 of 2 Page [1] Page Size: 10 [50] 100 500

Template	Version No.	Web Username	Web Port	Web Password	Telnet Username	Telnet Password	Operation
default	V1	admin	80	******	admin	******	✎ ✖
example	V3	admin	80	******	admin	******	✎ ✖

Table 23 Template management functions

Function	Description
Template list	Allows you to view details about access templates and modify and delete templates.
Adding a template	Allows you to add templates.

Template list

From the navigation tree of the system management component, select **Access Template List** under **Device Management**. The access template management page appears, as shown in Figure 21. Details of all access templates are displayed on the page.

Table 24 Fields of the template list

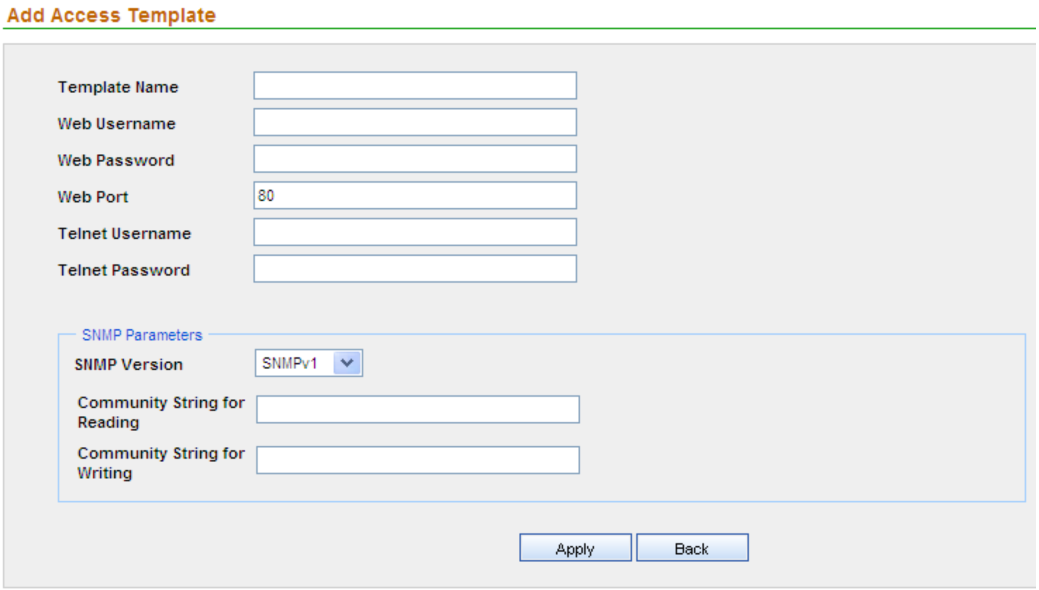
Field	Description
Template	Name of the template
Version No.	Version of the template
Web Username	Username for managing the device through web
Web Port	Port of the device providing web access service
Web Password	Password for managing the device through web, displayed as a string of asterisks (*)
Telnet Username	Username for telneting to the device
Telnet Password	Password for telneting to the device, displayed as a string of asterisks (*)
Operation	• Click the ✎ icon of a template to modify the template. • Click the ✖ icon of a template to delete the template.

Return to Template management functions.

Adding a template

From the navigation tree of the system management component, select **Access Template List** under **Device Management** to enter the access template management page. Then, click **Add** to add a template as shown in Figure 22 and Table 25.

Figure 22 Add a template



Add Access Template

Template Name	
Web Username	
Web Password	
Web Port	80
Telnet Username	
Telnet Password	

SNMP Parameters

SNMP Version	SNMPv1
Community String for Reading	
Community String for Writing	

Table 25 Template configuration items

Item	Description
Template Name	Required Type a name for the template, a string of 1 to 20 characters.
Web Username	Required Specify the username for managing the device through web. The username can comprise up to 20 characters.
Web Password	Required Specify the password for managing the device through web. IMPORTANT: The strength of the password must meet the password strength requirements of the device.
Web Port	Required Specify the port of the device providing web access service. Port 80 is the default.
Telnet Username	Optional Specify the username for telneting to the device. The username can comprise up to 20 characters.
Telnet Password	Optional Specify the password for telneting to the device. IMPORTANT:

	The strength of the password must meet the password strength requirements of the device.
SNMP Version	Required Select an SNMP version, which can be SNMPv1, SNMPv2, or SNMPv3.
Community String for Reading	Required Specify the SNMP read community string to be used for communication with the device. It can be a string of up to 20 characters.
Community String for Writing	Required Specify the SNMP write community string to be used for communication with the device. It can be a string of up to 20 characters.
Authentication Username	Required for SNMPv3 Specify the authentication username to be used for communication with the device.
Authentication Protocol	Required for SNMPv3 Specify the authentication protocol to be used for communication with the device.
Password	Required when you select the authentication protocol **HMAC-MD5** or **SMAC-SHA**. Specify the authentication password to be used for communication with the device.
Encryption Protocol	Required when you select the authentication protocol **HMAC-MD5** or **SMAC-SHA**. Specify the encryption protocol to be used for communication with the device.
Password	Required when you select the encryption protocol **CBS-DES** or **AES-128**. Specify the encryption password to be used for communication with the device.

Return to Template management functions.

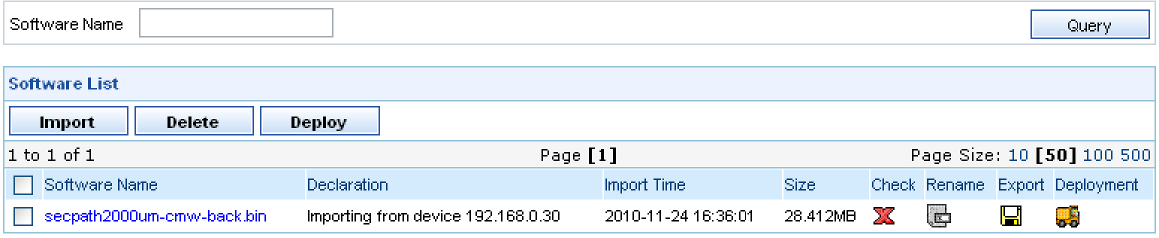
Managing the device software database

The device software database is used to save all device software. It allows you to import device software to the database from files or devices, and deploy software to devices.

Configuration guide

From the navigation tree of the system management component, select **Device Software Database** under **Device Management** to enter the device software database page, as shown in Figure 23. Table 26 describes the device software database functions, Table 27 describe the device software database query option, and Table 28 describes the fields of the device software database list.

Figure 23 Device software database page



Software Name

Query

Software List

Import Delete Deploy

1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

□	Software Name	Declaration	Import Time	Size	Check	Rename	Export	Deployment
□	secpath2000um-cmw-back.bin	Importing from device 192.168.0.30	2010-11-24 16:36:01	28.412MB	✗	✎	💾	🚚

Table 26 Device software database functions

Function	Description
Importing device software	Allows you to import device software from a file or from a device.
Deleting device software	Allows you to remove software that is no longer in use. Follow these steps: 1. Select the check box before software names. 2. Click **Delete**.
Deploying software to device	Allows you to deploy software to devices.

Table 27 Device software database query option

Option	Description
Software Name	Specify the name of the software.

Table 28 Fields of the device software database list

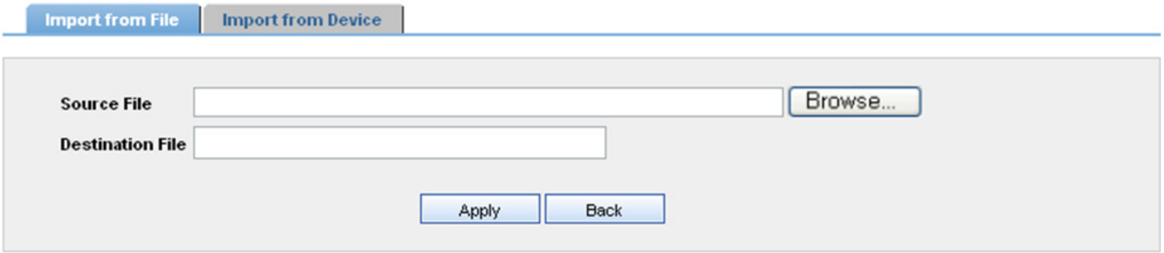
Field	Description
Software Name	Name of the software file
Declaration	Remarks on the software
Import Time	Time when the software is imported
Size	Size of the software file
Check	Allows you to check whether the exported software is consistent with the device software.
Rename	Allows you to rename the software file.
Export	Allows you to export the software to a local place
Deployment	Allows you to deploy the software to devices.

Importing device software

From the navigation tree of the system management component, select **Device Software Database** under **Device Management** to enter the device software database page, as shown in Figure 23. Then, click **Import** to bring up the device software import page, as shown in Figure 24. You can import device software from a file or from devices:

- To import device software from a file, specify the source and destination files.
- To import device software from devices, specify the devices.

Figure 24 Device software import page



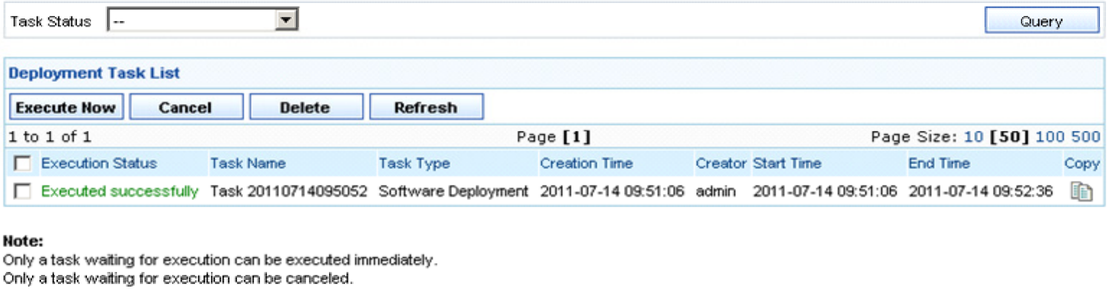
Managing deployment tasks

This function allows you to view all deployment task information.

Configuration guide

From the navigation tree of the system management component, select **Deploy Task** under **Device Management** to enter the deployment task list page, as shown in Figure 25.

Figure 25 Deployment task list



1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

□	Execution Status	Task Name	Task Type	Creation Time	Creator	Start Time	End Time	Copy
□	Executed successfully	Task 20110714095052	Software Deployment	2011-07-14 09:51:06	admin	2011-07-14 09:51:06	2011-07-14 09:52:36	

Note:
Only a task waiting for execution can be executed immediately.
Only a task waiting for execution can be canceled.

On the deployment task list, you can:

- Execute deployment tasks immediately.
- Cancel deployment tasks.
- Delete deployment tasks.
- Refresh the deployment task information.

Table 29 describes the deployment task query option and Table 30 describes the fields of the deployment task list.

Table 29 Deployment task query option

Option	Description
Task Status	Select a state to list all deployment tasks in the state.

Table 30 Fields of the deployment task list

Field	Description
Execution Status	Current status of the deployment task
Task Name	Name of the deployment task
Task Type	Type of the deployment task

Creation Time	Time when the deployment task is created
Creator	Creator of the deployment task
Start Time	Time when the deployment task starts
End Time	Time when the deployment task ends
Copy	Allows you to create a deployment task based on the selected one.

Operator management

The operator management function allows you to manage operators and operation logs, and to change operator passwords.

Managing operators

This function allows you to manage the rights of web users. There are three user levels: common operator, system administrator, and super administrator. A higher level operator has all the rights of operators of a lower level. Table 31 describes the rights of the three user levels.

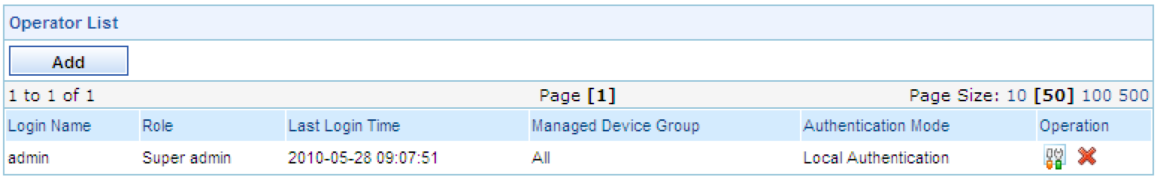
Table 31 User levels and the rights

User level	Rights
Common operator (visitor level)	• Use the Ping tool • Cannot perform any configuration
System administrator (monitoring level)	• Use the Ping tool • View configuration information except for user information • View log information except for operation logs • Perform configurations except for user configuration, operation logging configuration,managing device groups, batch import, access template management,System Parameter,Management Ports,Mail server,LDAP Server Management,Log Retention Time,disk monitoring,subsystem management,license management
Super administrator (management level)	• View all configurations • View all logs • Perform all configurations

Configuration guide

From the navigation tree of the system management component, select **Operators** under **Operator Management**. The operator management page appears, as shown in Figure 26.

Figure 26 Operator management page



Operator List

Add

1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

Login Name	Role	Last Login Time	Managed Device Group	Authentication Mode	Operation
admin	Super admin	2010-05-28 09:07:51	All	Local Authentication	✎ ✖

Table 32 Operator management functions

Function	Description
Operator list	Allows you to view details about operators, modify operator information, and delete operators.
Adding an operator	Allows you to add operators.

Operator list

From the navigation tree of the system management component, select **Operators** under **Operator Management**. The operator management page appears, as shown in Figure 26.

Table 33 Fields of the operator list

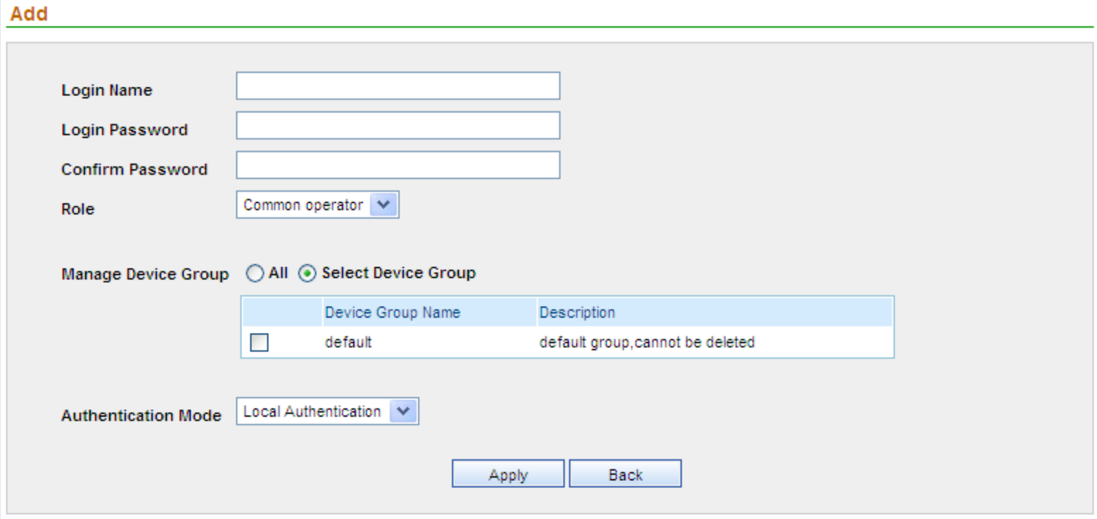
Field	Description
Login Name	Username used by the operator at login
Role	Operation level of the operator
Last Login Time	Last time when the operator logged in
Managed Device Groups	Device groups for which the operator has operation rights
Authentication Mode	Authentication mode of the operator
Operation	• Click the 🛠 icon of an operator to modify the operator's information. • Click the ✖ icon of an operator to delete the operator.

Return to Operator management functions.

Adding an operator

From the navigation tree of the system management component, select **Operators** under **Operator Management** to enter the operator management page. Then, click **Add** to enter the page for adding an operator, as shown in Figure 27. Table 34 describes the operator configuration items.

Figure 27 Add an operator



Add

Login Name

Login Password

Confirm Password

Role: Common operator

Manage Device Group: ○ All ● Select Device Group

	Device Group Name	Description
□	default	default group,cannot be deleted

Authentication Mode: Local Authentication

Table 34 Operator configuration items

Item	Description
Login Name	Type a name for the operator, a string of up to 40 characters.
Login Password	Specify a password for the operator to use at login. The password must comprise 6 to 20 alphanumeric characters, and its strength must meet the password strength requirements of the device.
Confirm Password	Type the password again, which must be the same as that for **Login Password**. If the two are not the same, an error message will appear, telling you that they must be identical.
Role	Select an operation level for the operator.
Manage Device Group	Specify which device groups the operator can manage.
Authentication Mode	Select an authentication mode for the operator. Available authentication modes include local authentication and LDAP authentication. If you select LDAP authentication, you must also select an LDAP server.

Return to Operator management functions.

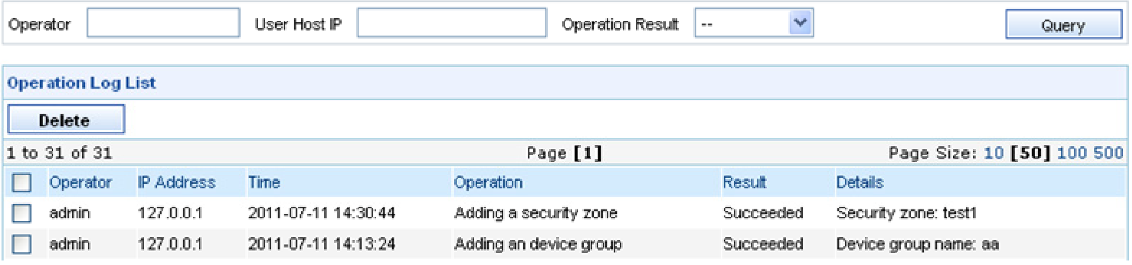
Managing operation logs

Configuration guide

Operation logs reflect what operators have done after login. A super administrator can view operations logs, query logs by different conditions, and delete logs.

From the navigation tree of the system management component, select **Operation Logs** under **Operator Management**. The operation log management page appears, as shown in Figure 28. Table 35 describes the operation log query options. You can use any combination of the options to query for the logs of interest.

Figure 28 Operation log management page



Operator User Host IP Operation Result -- Query

Operation Log List

Delete

1 to 31 of 31 Page [1] Page Size: 10 [50] 100 500

□	Operator	IP Address	Time	Operation	Result	Details
□	admin	127.0.0.1	2011-07-11 14:30:44	Adding a security zone	Succeeded	Security zone: test1
□	admin	127.0.0.1	2011-07-11 14:13:24	Adding an device group	Succeeded	Device group name: aa

Table 35 Operation log query options

Option	Description
Operator	Specify the operator whose logs you are interested in.
Gateway IP	Type the IP address of the gateway.
Operation Result	Select the operation result of the operations. By default, the value of this option is --, which means both the succeeded and failed operations.

Table 36 Fields of the operation log list

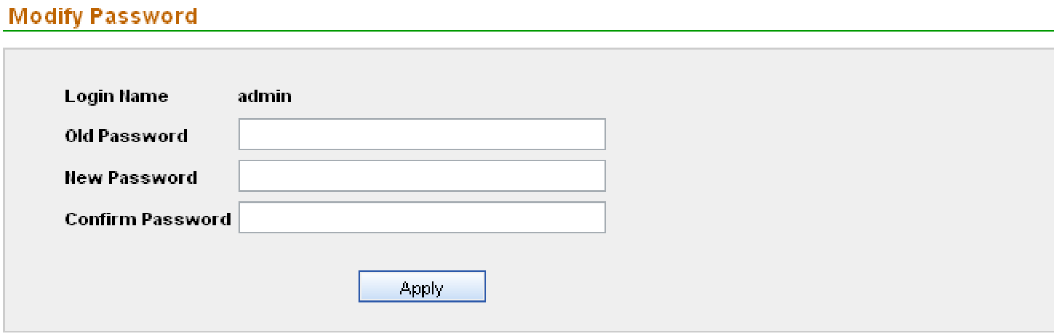
Field	Description
Operator	Name of the operator
IP Address	IP address of the PC used by the operator to log in
Time	Time when the operation occurred
Operation	What the operator did
Result	Whether the operation succeeded or failed
Details	Operation details

Changing your login password

This function allows you to change your login password.

From the navigation tree of the system management component, select **Password** under **Operator Management** to enter the page for changing your login password, as shown in Figure 29. Table 37 describes the configuration items for changing your password.

Figure 29 Change your login password



Modify Password

Login Name	admin
Old Password	
New Password	
Confirm Password	

Table 37 Configuration items for changing your password

Item	Description
Old Password	Required Type the current password. The password must be an alphanumeric string of 6 to 20 characters.
New Password	Required Type the new password. The password must be an alphanumeric string of 6 to 20 characters.
Confirm Password	Required Type the new password again. This password must be exactly the same as that for **New Password**.

System configuration

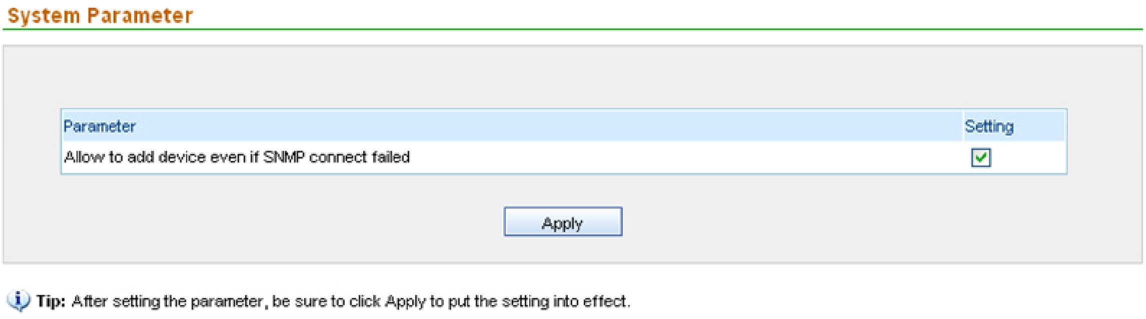
Configuring system parameter

Configure the system parameter to allow non-SNMP devices in the system.

Configuration guide

From the navigation tree of the system management component, select **System Parameter** under **System Config**. The system parameter configuration page appears, as shown in Figure 30. Select the check box for the parameter and click **Apply**.

Figure 30 System parameter setting



System Parameter

Parameter	Setting
Allow to add device even if SNMP connect failed	☑

Tip: After setting the parameter, be sure to click Apply to put the setting into effect.

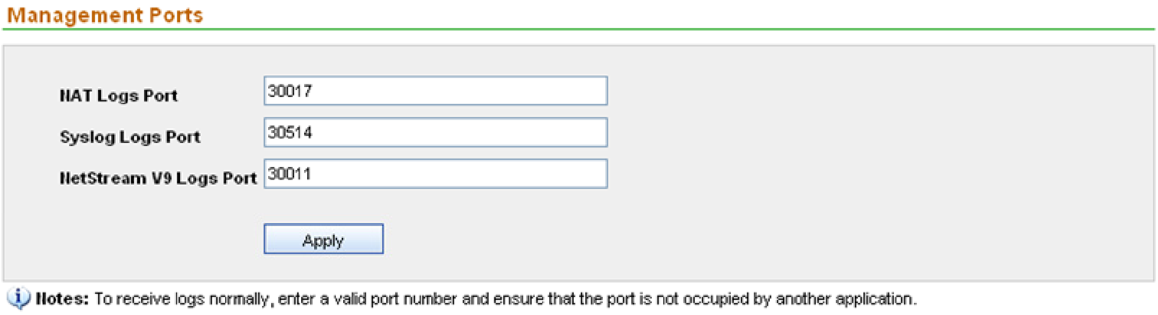
Configuring management ports

This module allows you to specify the Firewall Manager background ports for receiving various logs from devices.

Configuration guide

From the navigation tree of the system management component, select **Management Ports** under **System Config**. The management ports configuration page appears, as shown in Figure 31. Table 38 describes the management port configuration items.

Figure 31 Management port configuration page



Management Ports

IIAT Logs Port: 30017

Syslog Logs Port: 30514

IIetStream V9 Logs Port: 30011

IIotes: To receive logs normally, enter a valid port number and ensure that the port is not occupied by another application.

Table 38 Management port configuration items

Item	Description
NAT Logs Port	Required

	Type the port for receiving NAT logs. The port number must be in the range from 1 to 65534.
Syslog Port	Required Type the port for receiving syslogs. The port number must be in the range from 1 to 65534.
NetStream V9 Logs Port	Required Type the port for receiving NetStream V9 logs. The port number must be in the range from 1 to 65534.

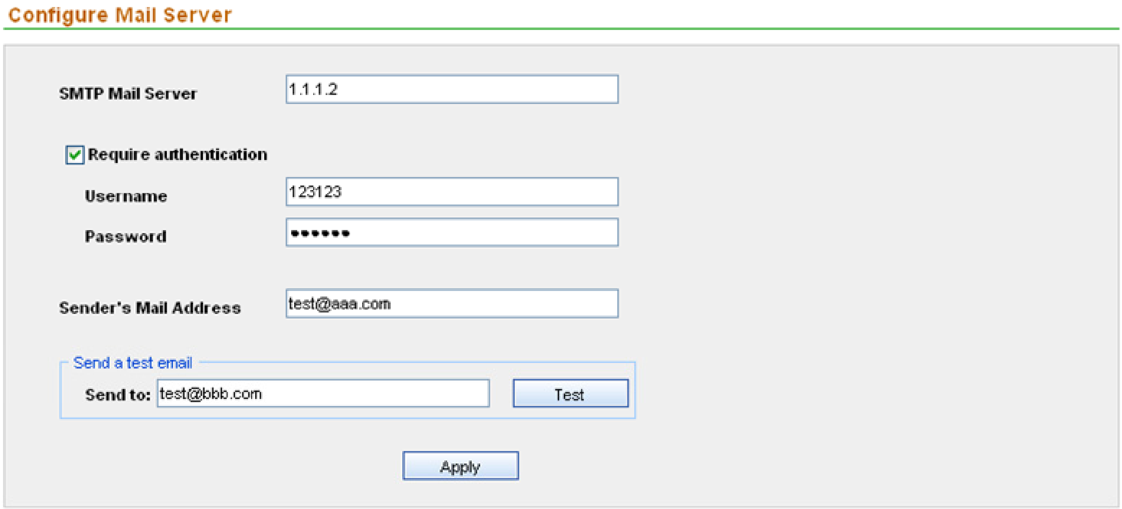
Configuring the mail server

This module allows you to configure the mail server information, so that the system emails alarm information to the specified server.

Configuration guide

From the navigation tree of the system management component, select **Mail Server** under **System Config**. The mail server configuration page appears, as shown in Figure 32. Table 39 describes the mail server configuration items.

Figure 32 Configure the mail server



Configure Mail Server

SMTP Mail Server: 1.1.1.2

☑ Require authentication

Username: 123123

Password: ••••••

Sender's Mail Address: test@aaa.com

Send a test email

Send to: test@bbb.com

Table 39 Mail server configuration items

Item	Description
SMTP Mail Server IP	Required Type the IP or domain name of the mail server. The domain name can comprise up to 100 characters.
Require authentication	Optional Specify whether the mail server authenticates the identities of users trying to access.
Username	Optional

	Type the username for identity authentication on the mail server. The password can comprise up to 80 characters.
Password	Optional Type the password for identity authentication on the mail server.
Sender's Mail Address	Required Type the mail address of the sender.

Managing filters

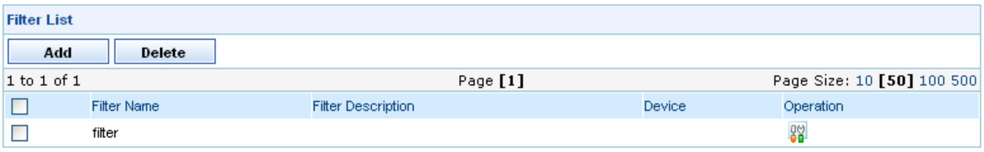
A filter is used to filter the information of IPS devices to present only information that you are interested in through reports.

By configuring filters, you can specify filtering conditions flexibly.

Configuration guide

From the navigation tree of the system management component, select **Filter Management** under **System Config**. The filter management page appears, as shown in Figure 33. Table 40 describes the filter management functions.

Figure 33 Filter management page



□	Filter Name	Filter Description	Device	Operation
□	filter			

Table 40 Filter management functions

Function	Description
Filter list	Allows you to view details about filters and modify filter settings.
Adding a filter	Allows you to add a filter.
Deleting filters	Allows you to delete filters that are no longer in use. Follow these steps: 1. Select the check boxes before the filters to be deleted. 2. Click **Delete**.

Filter list

From the navigation tree of the system management component, select **Filter Management** under **System Config**. The filter management page appears, as shown in Figure 33.

Table 41 Fields of the filter list

Field	Description
Filter Name	Name of the filter
Filter Description	Description of the filter
Device	Device that the system collects statistics on

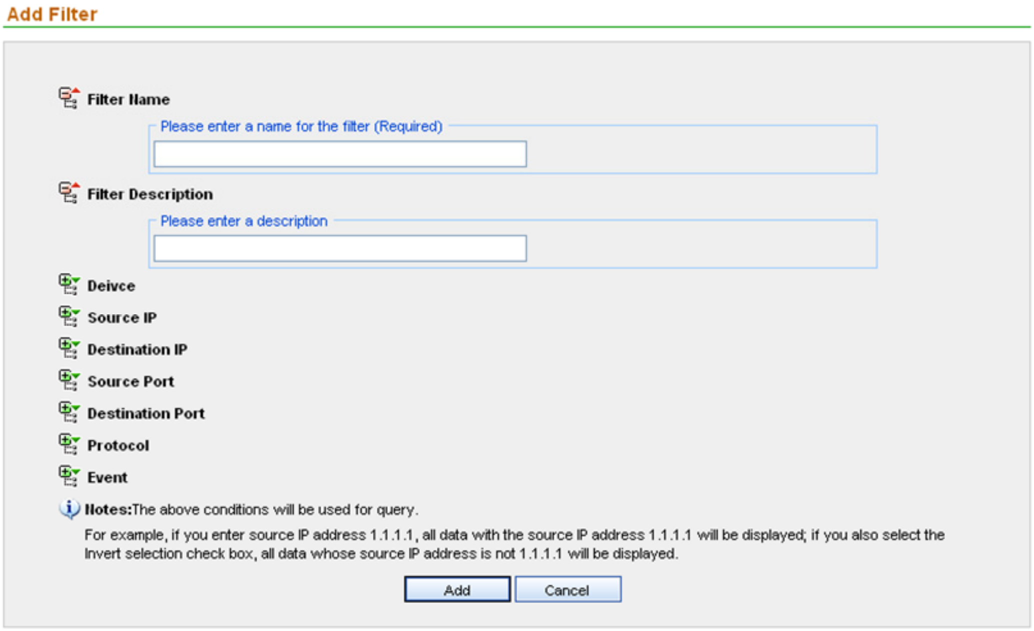
Field	Description
Operation	Click the icon of a filter to modify the settings of the filter.

Return to Filter management functions.

Adding a filter

From the navigation tree of the system management component, select **Filter Management** under **System Config** to enter the filter management page. Then, click **Add** to enter the page for adding a filter, as shown in Figure 34. Table 42 describes the filter configuration items.

Figure 34 Add a filter



Add Filter

Filter Name

Please enter a name for the filter (Required)

Filter Description

Please enter a description

Deivce

Source IP

Destination IP

Source Port

Destination Port

Protocol

Event

Notes: The above conditions will be used for query.

For example, if you enter source IP address 1.1.1.1, all data with the source IP address 1.1.1.1 will be displayed; if you also select the Invert selection check box, all data whose source IP address is not 1.1.1.1 will be displayed.

Table 42 Filter configuration items

Item	Description
Filter Name	Required Type a name for the filter. The filter name can comprise up to 40 characters.
Filter Description	Optional Type a description for the filter. The description can comprise up to 50 characters.
Device	Optional Select the devices that you want the system to collect statistics on.
Source IP	Optional Specify the source IP addresses that you want the system to collect statistics on.
Destination IP	Optional Specify the destination IP addresses that you want the system to collect statistics on.
Source Port	Optional

	Specify the source ports that you want the system to collect statistics on.
Destination Port	Optional Specify the destination ports that you want the system to collect statistics on.
Protocol	Optional Select the protocols that you want the system to collect statistics on.
Event	Optional Specify the events that you want the system to collect statistics on.

△ CAUTION:

The configuration items given in the previous table can be used to define query conditions. For example, you can enter source IP address 1.1.1.1 to search for data with the source IP address being 1.1.1.1, or enter source IP address 1.1.1.1 and select the **Invert selection** check box to search for data whose source IP address is not 1.1.1.1.

Return to Filter management functions.

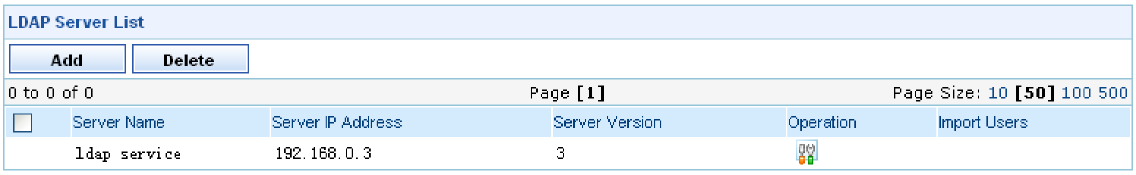
Managing LDAP servers

This function allows you to configure LDAP servers. Then, you can select LDAP authentication to verify the operator's username and password when they log in to the Firewall Manager system.

Configuration guide

From the navigation tree of the system management component, select **LDAP Server Management** under **System Config**. The LDAP server management page appears, displaying all LDAP servers.

Figure 35 LDAP server management page



□	Server Name	Server IP Address	Server Version	Operation	Import Users
	ldap service	192.168.0.3	3	✎	

Table 43 LDAP server management functions

Function	Description
LDAP server list	Allows you to view details about LDAP servers and modify LDAP server settings.
Adding an LDAP server	Allows you to add an LDAP server.
Deleting LDAP servers	Allows you to delete one or more LDAP servers from the system.

LDAP server list

The LDAP server list is on the LDAP server management page, as shown in Figure 35.

Table 44 Fields of the LDAP server list

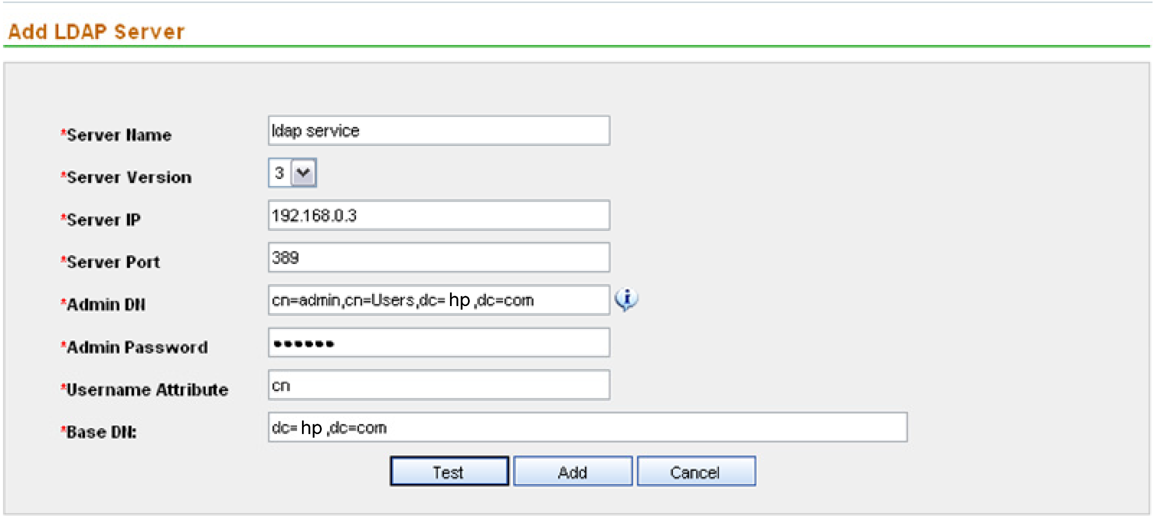
Field	Description
Server Name	Name of the LDAP server
Server IP Address	IP address of the LDAP server
Server Version	Version information of the LDAP server
Operation	Click the icon of a LDAP server to modify the settings of the filter.
Import Users	The device does not support importing users.

Return to LDAP server management functions.

Adding an LDAP server

From the navigation tree of the system management component, select **LDAP Server Management** under **System Config**. Click **Add** to add an LDAP server, as shown in Figure 36 and Table 45.

Figure 36 Add an LDAP server



Add LDAP Server

*Server Name	ldap service
*Server Version	3
*Server IP	192.168.0.3
*Server Port	389
*Admin DN	cn=admin,cn=Users,dc= hp ,dc=com
*Admin Password	••••••
*Username Attribute	cn
*Base DN:	dc= hp ,dc=com

Table 45 LDAP server configuration items

Item	Description
Server Name	Required Type a name for the LDAP server.
Server Version	Required Select an LDAP server version.
Server IP	Required Type an IP address for the LDAP server.
Server Port	Required Type a port number for the LDAP server.
Admin DN	Required Type the administrator DN for the LDAP server.

Admin Password	Required Type the administrator password for the LDAP server.
Username Attribute	Required Type a username attribute for the LDAP server.
Base DN	Required Type a base DN for the LDAP server.

Return to LDAP server management functions.

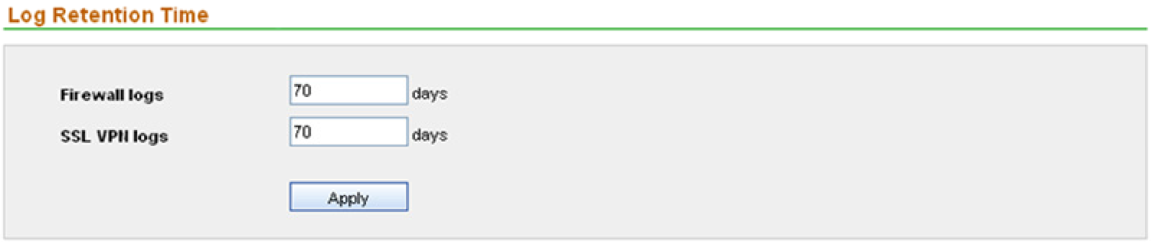
Managing log retention time

This function allows you to configure the period of time during which the system keeps the firewall logs and SSL VPN logs for query.

Configuration guide

From the navigation tree of the system management component, select **Log Retention Time** under **System Config**. The log retention time configuration page appears, as shown in Figure 37. Set the number of days that the system keeps the firewall logs and SSL VPN logs and then click **Apply**.

Figure 37 Log retention time configuration page



Log Retention Time

Firewall logs 70 days

SSL VPN logs 70 days

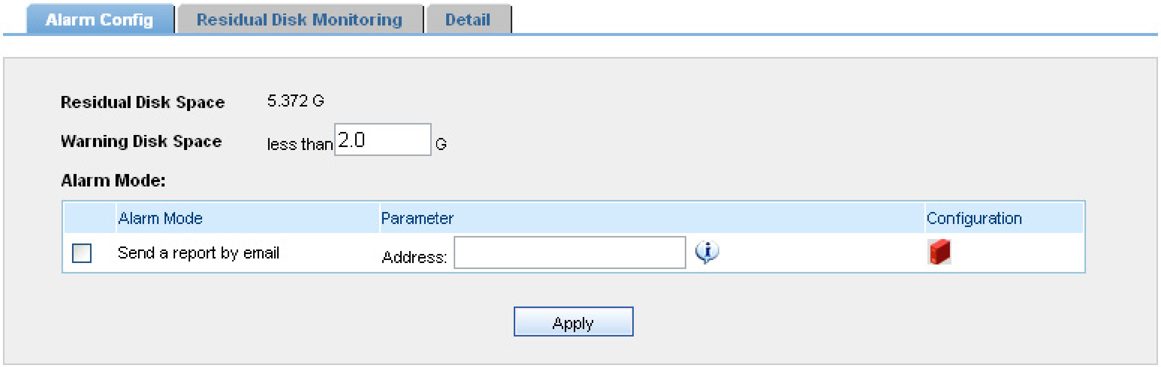
Monitoring the disk space

This function provides the usage statistics of the disk space under the system installation directory. It allows you to set the minimum free disk space, so that an alarm is generated whenever the free disk space is less than the threshold. You can also specify an email address so that the system sends generated alarms to the mail box. This function helps reduce data loss due to lack of disk space.

Configuration guide

From the navigation tree of the system management component, select **Disk Monitoring** under **System Config**. The disk space alarm configuration page appears, as shown in Figure 38. On the page, you can set the disk space alarm threshold, so that the system issues an alarm whenever the free disk space is less than the threshold.

Figure 38 Disk space alarm configuration page



Residual Disk Space 5.372 G

Warning Disk Space less than 2.0 G

Alarm Mode:

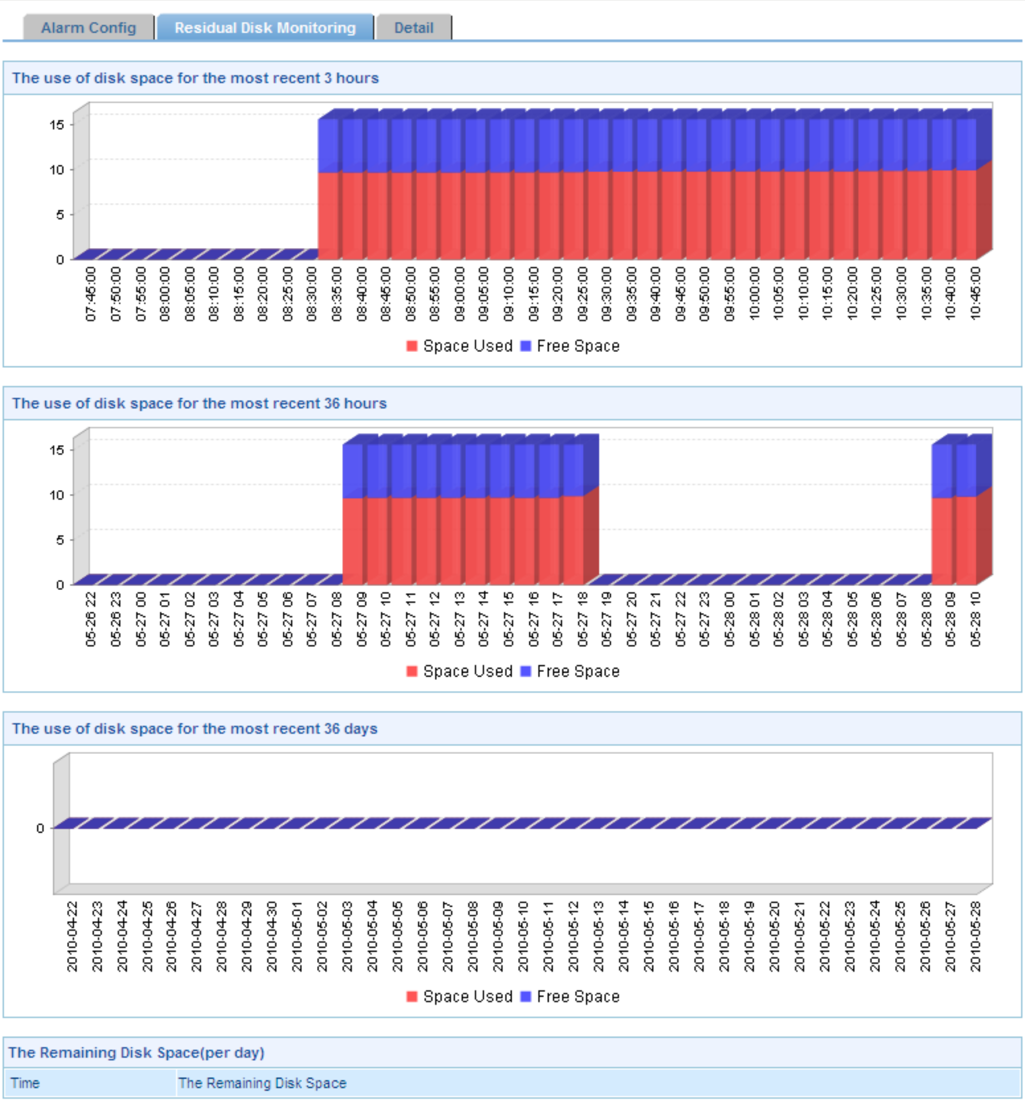
	Alarm Mode	Parameter	Configuration
□	Send a report by email	Address:	

Table 46 Alarm configuration items of the disk space for logs

Item	Description
Warning Disk Space	Required Set the minimum free disk space required. An alarm is generated once the actual free disk space is lower than this value.
Send a report by email	Optional Selecting the check box will make the system send generated alarms to the specified mail box.

You can also select the **Residual Disk Monitoring** tab to view the disk space usage information in the last three hours, 36 hours, and 36 days, and the remaining disk space per day, or select the **Detail** tab to view disk space usage statistics of function modules, as shown in Figure 39.

Figure 39 Free disk space monitoring page



The use of disk space for the most recent 3 hours

The use of disk space for the most recent 36 hours

The use of disk space for the most recent 36 days

The Remaining Disk Space(per day)

Time	The Remaining Disk Space

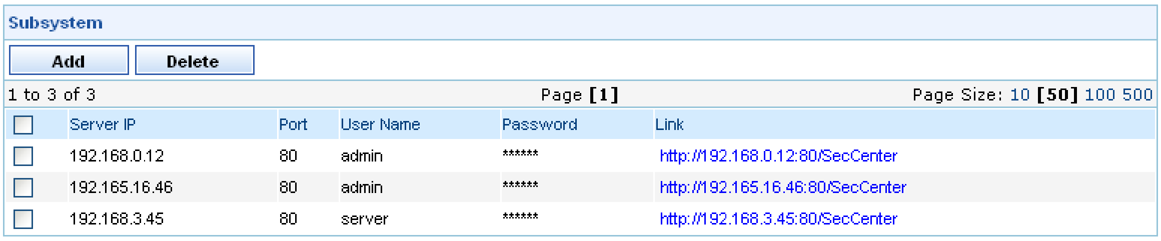
Managing subsystems

The subsystem management allows you to manage and monitor multiple Firewall Managers effectively. By adding different systems as the subsystems, you can access these subsystems by simply clicking their URL links instead of entering the URLs, usernames and passwords repeatedly.

Configuration guide

From the navigation tree of the system management component, select **Subsystem Management** under **System Config** to enter subsystem configuration page, as shown in Figure 40. Table 47 describes the fields of the subsystem list.

Figure 40 Subsystem information



Subsystem

Add | Delete

1 to 3 of 3 Page [1] Page Size: 10 [50] 100 500

□	Server IP	Port	User Name	Password	Link
□	192.168.0.12	80	admin	******	http://192.168.0.12:80/SecCenter
□	192.165.16.46	80	admin	******	http://192.165.16.46:80/SecCenter
□	192.168.3.45	80	server	******	http://192.168.3.45:80/SecCenter

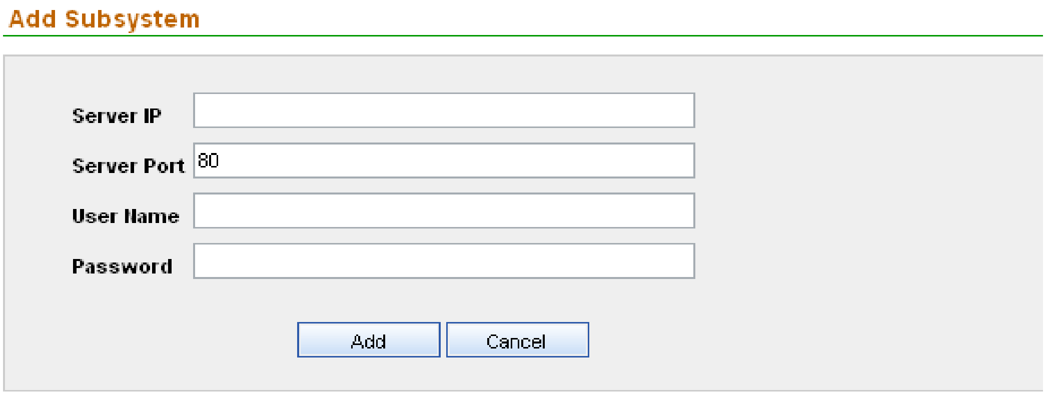
Table 47 Fields of the subsystem list

Field	Description
Server IP	IP address of the server for the subsystem.
Port	Port for connecting to the subsystem.
User Name	Username for logging in to the subsystem.
Password	Password for logging in to the subsystem.
Link	URLs of the subsystem. Click a link to log in to the subsystem.

Adding a subsystem

From the navigation tree of the system management component, select **Subsystem Management** under **System Config**. Click **Add** to enter the page for adding a subsystem, as shown in Figure 41. Table 48 describes the configuration items for adding a subsystem

Figure 41 Add a subsystem



Add Subsystem

Server IP

Server Port 80

User Name

Password

Add | Cancel

Table 48 Configuration items for adding a subsystem

Item	Description
Server IP	Required Type the IP address for the subsystem.
Server Port	Required Type the port of the subsystem. It defaults to port 80.

User Name	Required Type the username for logging in to the subsystem. The username can comprise up to 40 characters.
Password	Required Specify the password for logging in to the subsystem. The password must comprise 6 to 20 alphanumeric characters,

Firewall management

The Firewall Manager enables centralized management of firewall devices in the network, centralized event collection and analysis, realtime monitoring, event snapshot, comprehensive analysis, event details, and log auditing. It provides abundant reports, which can be exported periodically.

To access the firewall management component, select the **Firewall** tab. Then, you can perform:

- Attack events monitoring
- Event analysis
- Event auditing
- Security policy management
- Firewall device management

Attack events monitoring

The firewall management component supports centralized monitoring of security events. It can collect and report attack events in real time, and provide the snapshot information based on firewall devices and events.

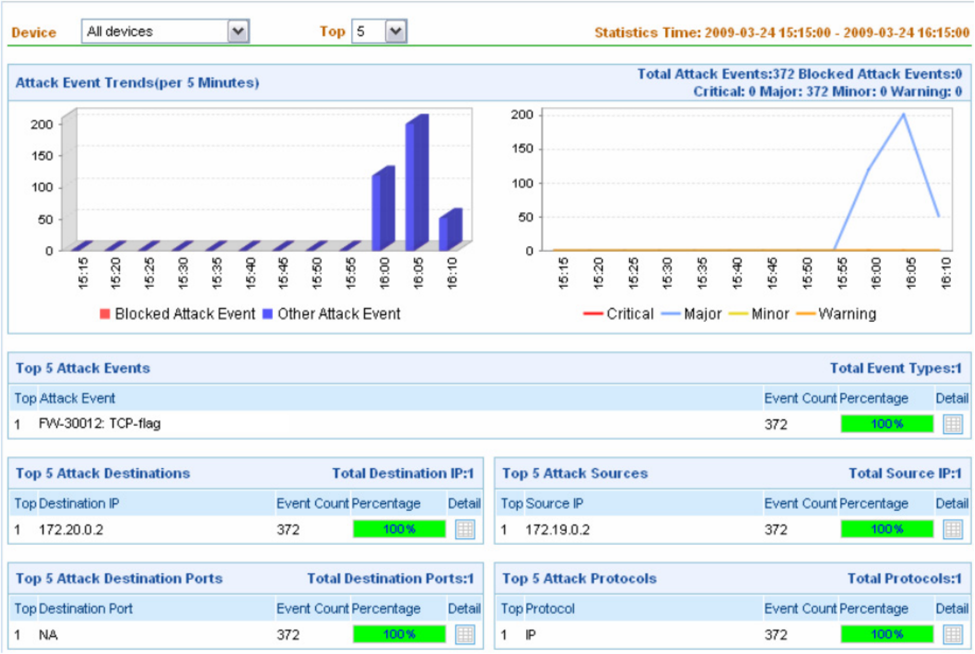
Snapshot of events

The event snapshot presents the attack protection information in the last hour, including the time, total number of events, blocked events count, source addresses and destination addresses, as well as event types. Besides, it provides the TopN list of attack events, attack destination IP addresses and ports, attack sources, and attack protocols, helping you track the latest security status of the network in an intuitive way.

Configuration guide

From the navigation tree of the firewall management component, select **Snapshot of Events** under **Events Monitor** to enter the event snapshot page, as shown in Figure 42.

Figure 42 Snapshot of events



Device: All devices   Top: 5   Statistics Time: 2009-03-24 15:15:00 - 2009-03-24 16:15:00

Attack Event Trends(per 5 Minutes)   Total Attack Events:372 Blocked Attack Events:0 Critical: 0 Major: 372 Minor: 0 Warning: 0

Top 5 Attack Events   Total Event Types:1

Top	Attack Event	Event Count	Percentage	Detail
1	FW-30012: TCP-flag	372	100%	▦

Top 5 Attack Destinations   Total Destination IP:1

Top	Destination IP	Event Count	Percentage	Detail
1	172.20.0.2	372	100%	▦

Top 5 Attack Sources   Total Source IP:1

Top	Source IP	Event Count	Percentage	Detail
1	172.19.0.2	372	100%	▦

Top 5 Attack Destination Ports   Total Destination Ports:1

Top	Destination Port	Event Count	Percentage	Detail
1	NA	372	100%	▦

Top 5 Attack Protocols   Total Protocols:1

Top	Protocol	Event Count	Percentage	Detail
1	IP	372	100%	▦

Table 49 Event snapshot query options

Option	Description
Device	Select a device, a device group, or **All devices** from the **Device** drop-down list. The system will display the relevant event information. All devices and device groups that are under your management will appear in the drop-down list. IMPORTANT: • Selecting a device group: Specifies all devices in the device group. • Selecting a device name: Specifies the single device.
Top	Select a value in the **Top** drop-down list to specify the number of records to be displayed in the graphs and lists.
Statistics Time	Period of time during which the statistics were collected. The snapshot statistics time is the last hour.

Table 50 Fields in the event snapshot lists

Field	Description
Attack Event Destination IP Destination Port Source IP Protocol	Attack protection statistics lists, including the event name/destination IP address/destination port/source IP address/protocol of the attack
Event Count	Count of events
Percentage	Percentage of the events

- In the **Detail** column of a TopN list, you can click the ▦ icon of an attack event to enter the attack event details page. For more information, see "Event details."

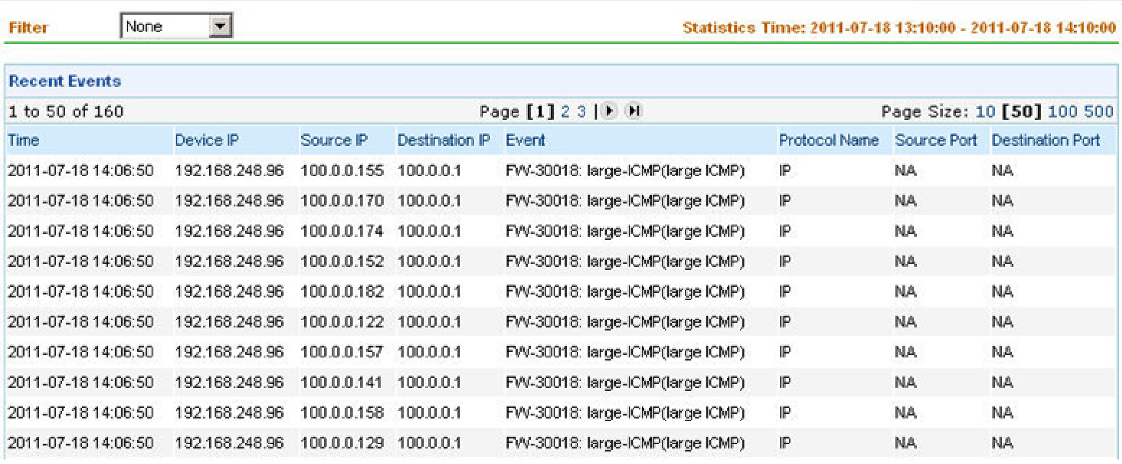
Recent events list

The firewall management component presents firewall attack events not only through graphs but also in a table list. The recent events list presents you the attack events occurred during the last hour, including the device IP address, the event's time, source IP address, destination IP address, event description, protocol, source port, and destination port. It also supports events query by different filters.

Configuration guide

From the navigation tree of the firewall management component, select **Recent List** under **Events Monitor**. The recent events page appears, listing the attack events that occurred during the last hour. as shown in Figure 43. Table 51 describes the query option of the list. Table 52 describes the fields of the event list.

Figure 43 List of recent attack events



Filter None

Statistics Time: 2011-07-18 13:10:00 - 2011-07-18 14:10:00

Recent Events

1 to 50 of 160 Page [1] 2 3 Page Size: 10 [50] 100 500

Time	Device IP	Source IP	Destination IP	Event	Protocol Name	Source Port	Destination Port
2011-07-18 14:06:50	192.168.248.96	100.0.0.155	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA
2011-07-18 14:06:50	192.168.248.96	100.0.0.170	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA
2011-07-18 14:06:50	192.168.248.96	100.0.0.174	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA
2011-07-18 14:06:50	192.168.248.96	100.0.0.152	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA
2011-07-18 14:06:50	192.168.248.96	100.0.0.182	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA
2011-07-18 14:06:50	192.168.248.96	100.0.0.122	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA
2011-07-18 14:06:50	192.168.248.96	100.0.0.157	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA
2011-07-18 14:06:50	192.168.248.96	100.0.0.141	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA
2011-07-18 14:06:50	192.168.248.96	100.0.0.158	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA
2011-07-18 14:06:50	192.168.248.96	100.0.0.129	100.0.0.1	FW-30018: large-ICMP(large ICMP)	IP	NA	NA

Table 51 Query option description

Option	Description
Filter	Select a filter from the drop-down list to display specific events.

Table 52 Fields of the recent events list

Field	Description
Time	Time when the event occurred
Device IP	IP address of the firewall device
Source IP	Source IP address of the attack packets
Destination IP	Destination IP address of the attack packets
Event	Description of the event
Protocol Name	Protocol of the attack packets
Source Port	Source port of the attack packets
Destination Port	Destination port of the attack packets

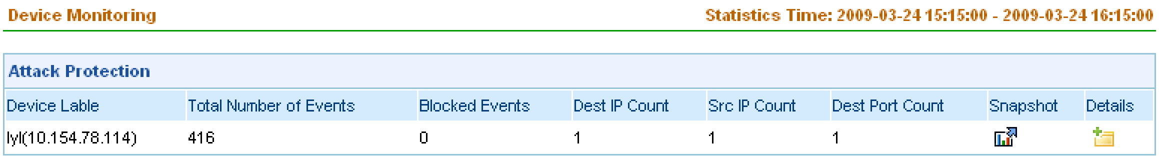
Device monitoring

In addition to the attack event information of the entire network, the firewall management component also allows you to view the attack event information of every firewall device.

Configuration guide

From the navigation tree of the firewall management component, select **Device Monitoring** under **Events Monitor** to enter the device monitoring page, as shown in Figure 44. The page presents the attack protection information in the last hour by device, including the total number of events, number of blocked events, number of source/destination IP addresses, and number of destination ports.

Figure 44 Device monitoring



Device Monitoring   Statistics Time: 2009-03-24 15:15:00 - 2009-03-24 16:15:00

Attack Protection

Device Lable	Total Number of Events	Blocked Events	Dest IP Count	Src IP Count	Dest Port Count	Snapshot	Details
lyl(10.154.78.114)	416	0	1	1	1	📊	📂

In the list, you can:

- Click the 📊 icon in the **Snapshot** column of a firewall device to enter the attack event snapshot page of the device. For more information, see "Snapshot of events."
- Click the 📂 icon in the **Details** column of a firewall device to enter the attack event details page of the device. For more information, see "Event details."

The firewall management component features comprehensive analysis and statistics reports, through which you can evaluate the network security status in real time, and take attack prevention measures accordingly.

Event analysis

Event overview

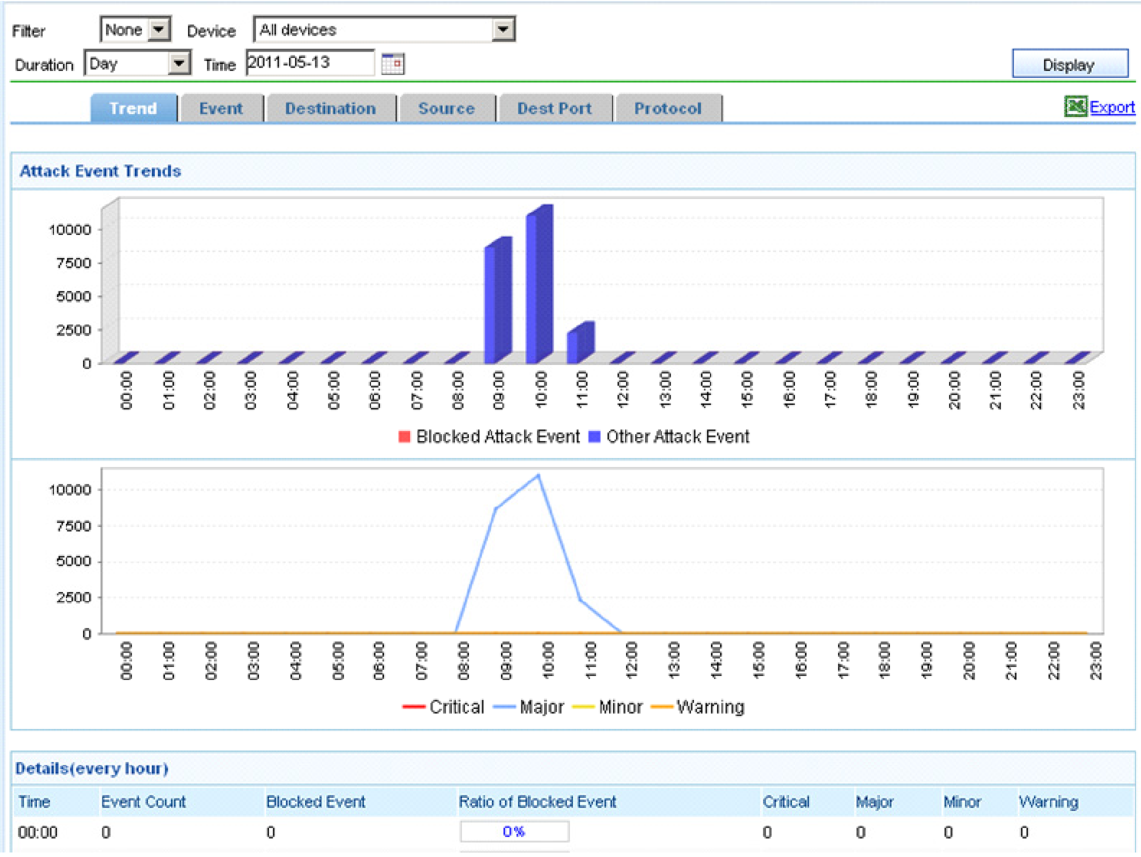
The system supports comprehensive analysis of attack events, including:

- Attack event trend analysis during a day, week, month, and a customized period
- TopN statistics reports by event, destination IP address, source IP address, destination port, and protocol. You can export the reports.

Configuration guide

From the navigation tree of the firewall management component, select **Event Overview** under **Event Analysis**. The attack event trend page appears by default, as shown in Figure 45. This page allows you to view attack event trend analysis during a day, week, month, or a customized period of time. This page shows a trend graph comparing the counts of blocked attack events and the other attack events as well as a trend graph of attack events by severity level. Under the trend graphs is a list showing the detailed attack event statistics, including the number of events, number of blocked events, and number of events of each severity level.

Figure 45 Attack event overview



Filter: None   Device: All devices

Duration: Day   Time: 2011-05-13

Details(every hour)

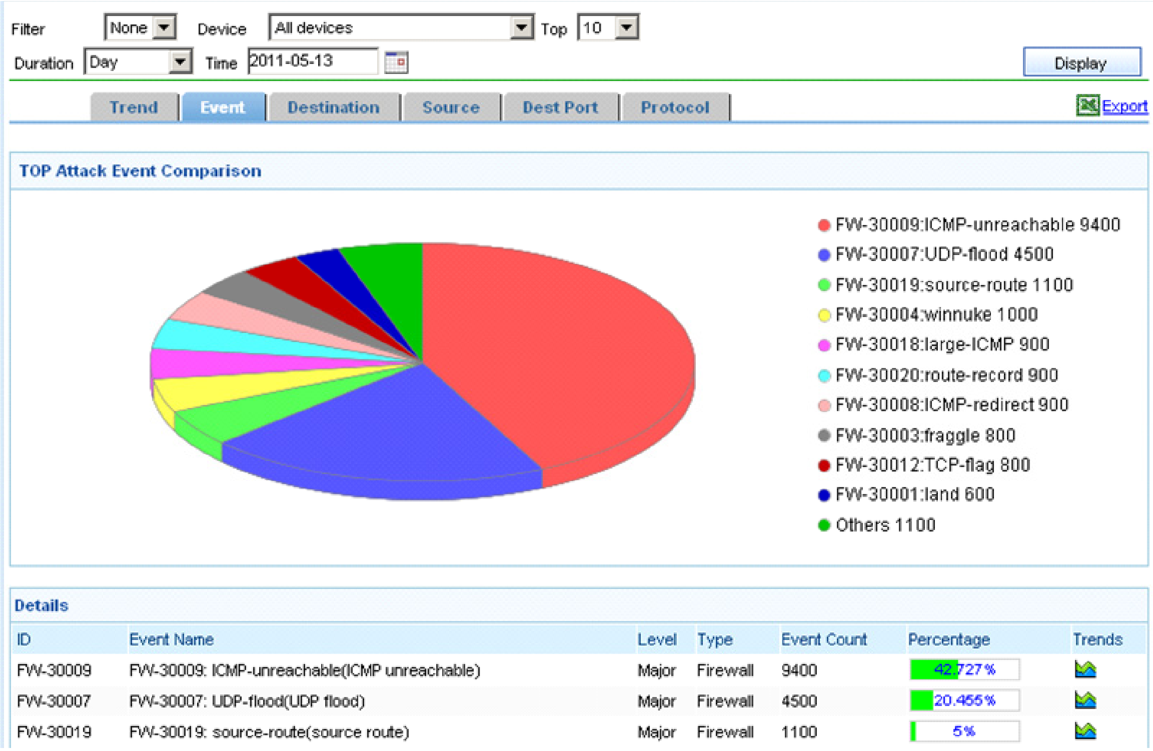
Time	Event Count	Blocked Event	Ratio of Blocked Event	Critical	Major	Minor	Warning
00:00	0	0	0%	0	0	0	0

Table 53 Query options on the attack event overview page

Option	Description
Device	Select a device, a device group, or **All devices** from the **Device** drop-down list. The system will display the relevant event information. All devices and device groups that are under your management will appear in the drop-down list. IMPORTANT: • If you select a device group, the system will display the event information (matching the filter) of all firewall devices in the device group in the specified statistics duration. • If you select a device name, the system will display the event information (matching the filter) of the firewall device in the specified statistics duration.
Filter	Select a filter from the drop-down list to filter attack events.
Duration	Select the statistics duration. You can select **Day**, **Week**, or **Month**, or select **Customize** to specify a statistics duration.
Time	Select the statistics time, whose value range varies with the statistics duration selected.

Besides the attack event trend graphs, the system also provides contrast graphs of the Top 10 attack events, attacked IP addresses, attacker IP addresses, attacked ports, and attack protocols, as shown in Figure 46.

Figure 46 Top 10 attack events contrast graph



Filter: None　Device: All devices　Top: 10

Duration: Day　Time: 2011-05-13

Details

ID	Event Name	Level	Type	Event Count	Percentage	Trends
FW-30009	FW-30009: ICMP-unreachable(ICMP unreachable)	Major	Firewall	9400	42.727%	
FW-30007	FW-30007: UDP-flood(UDP flood)	Major	Firewall	4500	20.455%	
FW-30019	FW-30019: source-route(source route)	Major	Firewall	1100	5%	

You can click the Export link to export all the analysis reports that the event overview function provides.

△ CAUTION:

Logs are aggregated at 3 o’clock every day. When you query event information of the current month, the system displays only the data collected from the first day of the month to the day before the current day.

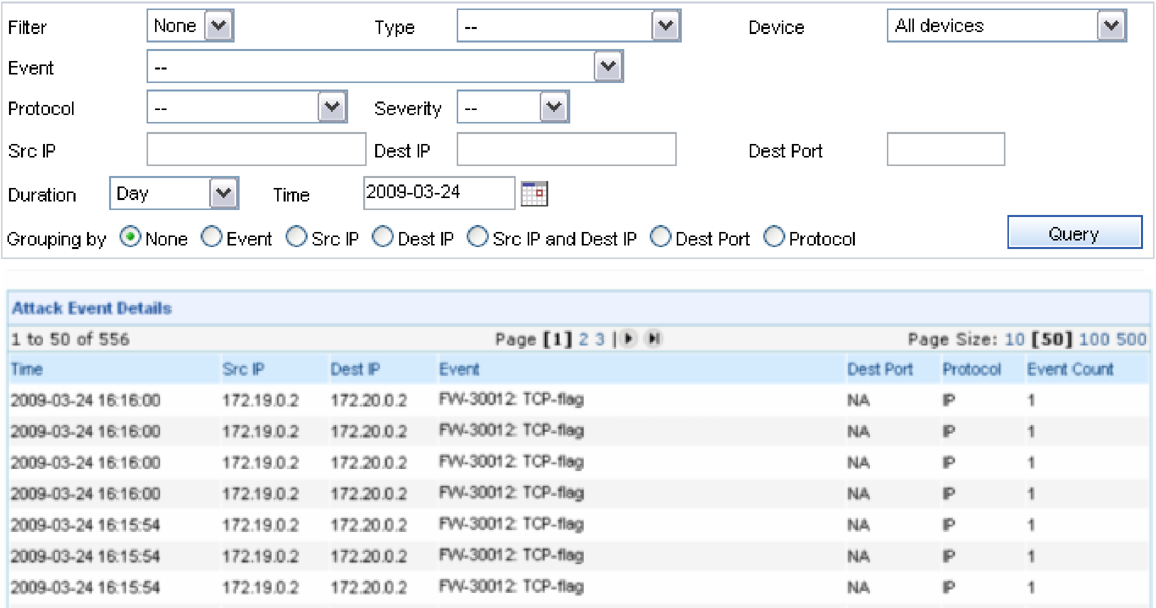
Event details

The Firewall Manager provides the powerful query function, which helps you quickly find the desired security event information from history data of months.

Configuration guide

From the navigation tree of the firewall management component, select **Event Details** under **Event Analysis** to enter the attack event details page, as shown in Figure 47. This page allows you to query attack events by event name, type, severity, source IP, destination IP, destination port, and protocol to view the event details. Table 54 describes the event details query options. Table 55 describes the fields of the attack event details list.

Figure 47 Attack event details



Filter	None	Type	--	Device	All devices
Event	--				
Protocol	--	Severity	--		
Src IP		Dest IP		Dest Port	
Duration	Day	Time	2009-03-24		

Grouping by ● None ○ Event ○ Src IP ○ Dest IP ○ Src IP and Dest IP ○ Dest Port ○ Protocol

Query

Attack Event Details

1 to 50 of 556 Page [1] 2 3 Page Size: 10 [50] 100 500

Time	Src IP	Dest IP	Event	Dest Port	Protocol	Event Count
2009-03-24 16:16:00	172.19.0.2	172.20.0.2	FW-30012: TCP-flag	NA	IP	1
2009-03-24 16:16:00	172.19.0.2	172.20.0.2	FW-30012: TCP-flag	NA	IP	1
2009-03-24 16:16:00	172.19.0.2	172.20.0.2	FW-30012: TCP-flag	NA	IP	1
2009-03-24 16:16:00	172.19.0.2	172.20.0.2	FW-30012: TCP-flag	NA	IP	1
2009-03-24 16:15:54	172.19.0.2	172.20.0.2	FW-30012: TCP-flag	NA	IP	1
2009-03-24 16:15:54	172.19.0.2	172.20.0.2	FW-30012: TCP-flag	NA	IP	1
2009-03-24 16:15:54	172.19.0.2	172.20.0.2	FW-30012: TCP-flag	NA	IP	1

Table 54 Event details query options

Option	Description
Device	Select a device, a device group, or **All devices** from the **Device** drop-down list. The system will display the relevant event information. All devices and device groups that are under your management will appear in the drop-down list. IMPORTANT: • If you select a device group, the system will display the event information (matching the filter) of all firewall devices in the device group in the specified statistics duration. • If you select a device name, the system will display the event information (matching the filter) of the firewall device in the specified statistics duration.
Filter	Select a filter from the drop-down list to filter attack events.
Duration	Select the statistics duration. You can select Day, Week, or Month, or select Customize to specify a statistics duration.
Time	Select the statistics time, whose value range varies with the statistics duration selected.
Event	Select an attack event type to query the specified type of attack events
Protocol	Select the attack protocol. The default is --, which means any protocol.
Severity	Select the attack severity. The default is --, which means any severity.
Src IP	Specify the attack source IP address.
Dest IP	Specify the attack destination IP address.
Dest Port	Specify the attack destination port.
Grouping by	Select a grouping mode. The system supports seven grouping modes: None, Event, Src IP, Dest IP, Src IP and Dest IP, Dest Port, and Protocol.

Table 55 Fields of the attack event details list

Field	Description
Time	Time when the attack event occurred
Src IP	Attack source IP address
Dest IP	Attack destination IP address
Event	Name of the event
Dest Port	Attack destination port
Protocol	Protocol used by the attack
Event Count	Number of events that occurred at the time

△ CAUTION:

Logs are aggregated at 3 o'clock every day. When you query event information of the current month, the system displays only the data collected from the first day of the month to the day before the current day.

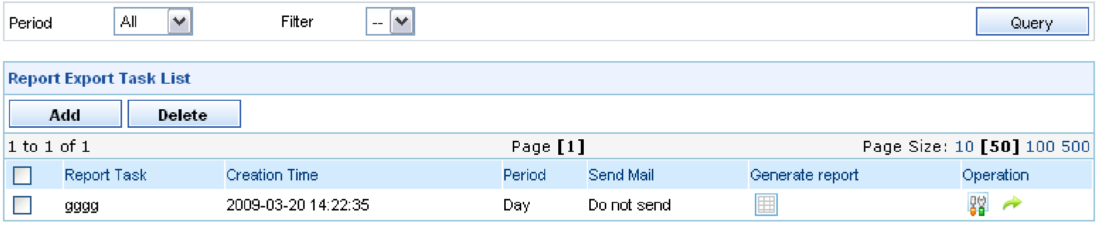
Report exporting management

This function is for exporting reports periodically. You can specify the report export period, filter, template, and notification mode to define a report export task. Then, the system will automatically export reports according to your configuration. You may specify to send a generated reports file to an Email box or download the reports file from the system.

Configuration guide

From the navigation tree of the firewall management component, select **Event Export Tasks** under **Event Analysis** to enter the report export task management page, as shown in Figure 48, where you can query report tasks by specifying a report period and/or filter.

Figure 48 Report export task management page



Period: All ▾ Filter: -- ▾ Query

Report Export Task List

Add Delete

1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

□	Report Task	Creation Time	Period	Send Mail	Generate report	Operation
□	gggg	2009-03-20 14:22:35	Day	Do not send	▦	

Table 56 Query options of the report export task list

Option	Description
Period	Select the export interval, which can be **Day**, **Week**, **Month**, **Year** or **All**. The system will display export tasks with the export interval being the one you selected.
Filter	Select a filter to filter the report export tasks.

Table 57 Fields of the report export task list

Field	Description
Report Task	Name of the report export task
Creation Time	Time when the task was created
Period	Reports export interval specified in the export task
Send Mail	Whether the report export file is to be sent to the specified mail box.
Generate Report	Click the icon of a task to display all generated report files of the task and the file creation time. These files have the same suffix, which is xls. Click a report file's name link to export the file.
Operation	• Click the icon of a task to enter the task modification page, where you can modify the task. • Click the icon of a task to test whether the task can function. If the test succeeds, the system generates a report file based on data of the current day. The filename starts with **test**.

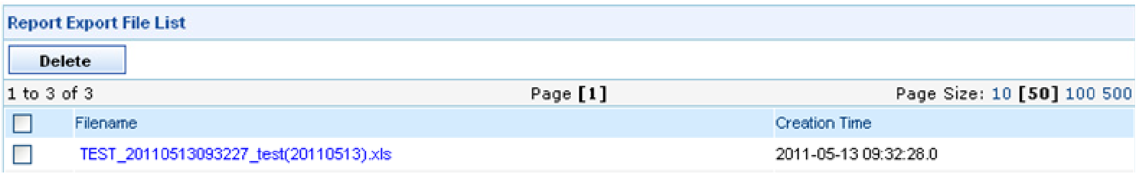
Table 58 Report export task management functions

Function	Description
Report export file list	Allows you to view the detailed information of all report export tasks, and modify and test a report export task.
Adding a report export task	Allows you to add a report export task.
Deleting report export tasks	Allows you to delete report export tasks. Follow these steps: 1. Select the check boxes before the tasks to be deleted. 2. Click **Delete**.

Report export file list

From the navigation tree of the firewall management component, select **Event Export Tasks** under **Event Analysis** to enter the report export task management page, as shown in Figure 48. Click the icon of a task to display all generated report files of the task and the file creation time. These files have the same suffix, which is xls. Click a report file's name link to export the file.

Figure 49 Report export file list



Report Export File List

Delete

1 to 3 of 3 Page [1] Page Size: 10 [50] 100 500

□	Filename	Creation Time
□	TEST_20110513093227_test(20110513).xls	2011-05-13 09:32:28.0

Table 59 Fields of the report export file list

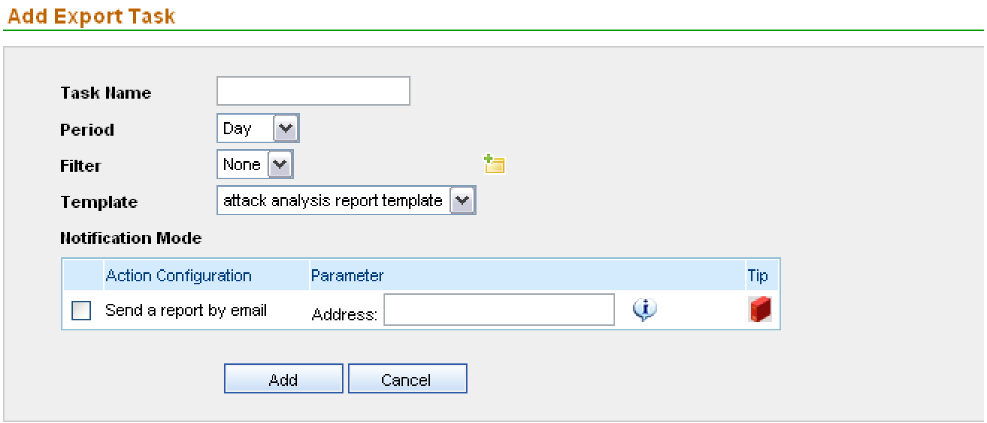
Field	Description
Filename	Name of the report export file
Creation Time	Time when the report export file was created

Return to Report export task management functions.

Adding a report export task

From the navigation tree of the firewall management component, select **Event Export Tasks** under **Event Analysis** to enter the report export task management page, as shown in Figure 48. Then, click **Add** to enter the page for adding a report export task, as shown in Figure 50. Table 60 describes the configuration items of a report export task.

Figure 50 Add a report export task



Add Export Task

Task Name	
Period	Day
Filter	None
Template	attack analysis report template

Notification Mode

	Action Configuration	Parameter	Tip
□	Send a report by email	Address:	

Table 60 Configuration items of a report export task

Item	Description
Task Name	Required Specify the name of the task. The name can comprise up to 40 characters.
Period	Required Specify the export interval, which can be **Day**, **Week**, **Month**, or **Year**. The default is **Day**.
Filter	Optional Specify the data to be included in the file by selecting a filter.
Template	Required Specify the template for exporting reports. Only one template is available at present.
Notification Mode	Optional Specify the Email box, to which the export file will be sent.

Return to Report export task management functions.

Event auditing

The event auditing function allows you to audit abnormal traffic logs, blacklist logs, operation logs, NAT logs, inter-zone access control logs, MPLS logs, and other logs. It also supports exporting up to 10,000 entries of logs. If there are more than 10,000 log entries, only the first 10,000 entries will be exported.

The event auditing function does not support cross-day query. If the query period spans a day or the query start time is later than the end time, the end time will automatically change to 23:59 of the same day as the start time.

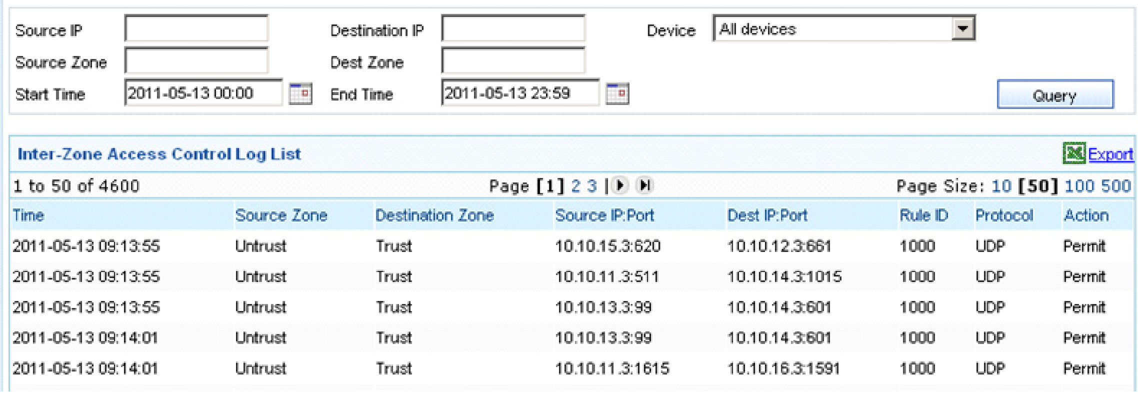
Inter-zone access log auditing

Configuration guide

From the navigation tree of the firewall management component, select **Inter-Zone Access Logs** under **Event Auditing** to enter the inter-zone access log auditing page, as shown in Figure 51.

A zone is a set consisting of one or more network segments. Inter-zone access logs are logs recorded by the firewall device when network segments of security zones are attacked. Inter-zone access log auditing is for analysis of such logs. Each log records the time when the attack occurred, the attack's source zone, destination zone, source IP:port, destination IP:port, attack protection rule ID, protocol, and action taken by the system, helping you know about the inter-zone access status of the network.

Figure 51 Inter-zone access log auditing



Source IP
Destination IP
Device: All devices
Source Zone
Dest Zone
Start Time: 2011-05-13 00:00
End Time: 2011-05-13 23:59

Query
Inter-Zone Access Control Log List
Export
1 to 50 of 4600
Page [1] 2 3
Page Size: 10 [50] 100 500

Time	Source Zone	Destination Zone	Source IP:Port	Dest IP:Port	Rule ID	Protocol	Action
2011-05-13 09:13:55	Untrust	Trust	10.10.15.3:620	10.10.12.3:661	1000	UDP	Permit
2011-05-13 09:13:55	Untrust	Trust	10.10.11.3:511	10.10.14.3:1015	1000	UDP	Permit
2011-05-13 09:13:55	Untrust	Trust	10.10.13.3:99	10.10.14.3:601	1000	UDP	Permit
2011-05-13 09:14:01	Untrust	Trust	10.10.13.3:99	10.10.14.3:601	1000	UDP	Permit
2011-05-13 09:14:01	Untrust	Trust	10.10.11.3:1615	10.10.16.3:1591	1000	UDP	Permit

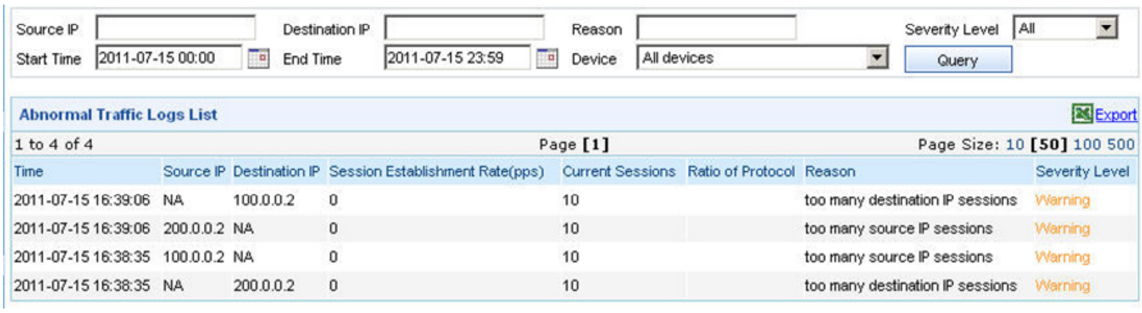
Abnormal traffic log auditing

Configuration guide

From the navigation tree of the firewall management component, select **Abnormal Traffic Logs** under **Event Auditing** to enter the abnormal traffic log auditing page, as shown in Figure 52. This page lists the logs in order of time, with the most recent log at the top. Each log records the time, source IP, and destination IP of the abnormal traffic, reason for giving the alarm, severity, and ratio of each protocol used by the abnormal traffic.

Abnormal traffic log auditing allows you to query abnormal traffic logs by source IP, destination IP, reason, severity level, time, and device group, helping you analyze traffic for abnormal behaviors.

Figure 52 Abnormal traffic log auditing



Source IP		Destination IP		Reason		Severity Level	All
Start Time	2011-07-15 00:00	End Time	2011-07-15 23:59	Device	All devices		Query

Abnormal Traffic Logs List Export

1 to 4 of 4 Page [1] Page Size: 10 [50] 100 500

Time	Source IP	Destination IP	Session Establishment Rate(pps)	Current Sessions	Ratio of Protocol	Reason	Severity Level
2011-07-15 16:39:06	NA	100.0.0.2	0	10		too many destination IP sessions	Warning
2011-07-15 16:39:06	200.0.0.2	NA	0	10		too many source IP sessions	Warning
2011-07-15 16:38:35	100.0.0.2	NA	0	10		too many source IP sessions	Warning
2011-07-15 16:38:35	NA	200.0.0.2	0	10		too many destination IP sessions	Warning

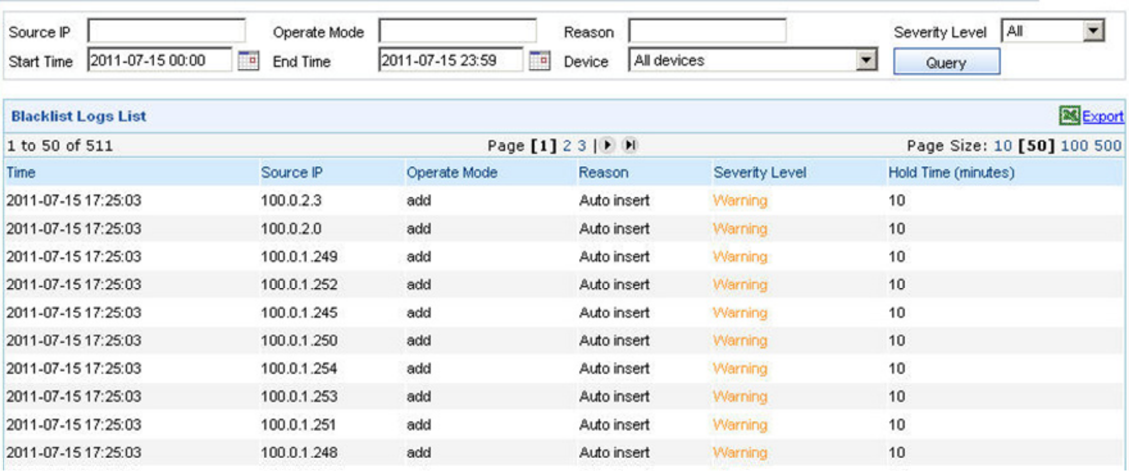
Blacklist log auditing

Configuration guide

From the navigation tree of the firewall management component, select **Blacklist Logs** under **Event Auditing** to enter the blacklist log auditing page, as shown in Figure 53.

Blacklist filters packets by source IP address. It can effectively filter out packets from a specific IP address. The blacklist log auditing page lists the blacklist logs of HP firewalls. Each log records the log time, source IP address, reason to add the address to the blacklist, as well as the blacklist entry's severity level, hold time of the log entry, and operation mode, helping you know the blacklist status of the network.

Figure 53 Blacklist log auditing



Source IP		Operate Mode		Reason		Severity Level	All
Start Time	2011-07-15 00:00	End Time	2011-07-15 23:59	Device	All devices		Query

Blacklist Logs List Export

1 to 50 of 511 Page [1] 2 3 Page Size: 10 [50] 100 500

Time	Source IP	Operate Mode	Reason	Severity Level	Hold Time (minutes)
2011-07-15 17:25:03	100.0.2.3	add	Auto insert	Warning	10
2011-07-15 17:25:03	100.0.2.0	add	Auto insert	Warning	10
2011-07-15 17:25:03	100.0.1.249	add	Auto insert	Warning	10
2011-07-15 17:25:03	100.0.1.252	add	Auto insert	Warning	10
2011-07-15 17:25:03	100.0.1.245	add	Auto insert	Warning	10
2011-07-15 17:25:03	100.0.1.250	add	Auto insert	Warning	10
2011-07-15 17:25:03	100.0.1.254	add	Auto insert	Warning	10
2011-07-15 17:25:03	100.0.1.253	add	Auto insert	Warning	10
2011-07-15 17:25:03	100.0.1.251	add	Auto insert	Warning	10
2011-07-15 17:25:03	100.0.1.248	add	Auto insert	Warning	10

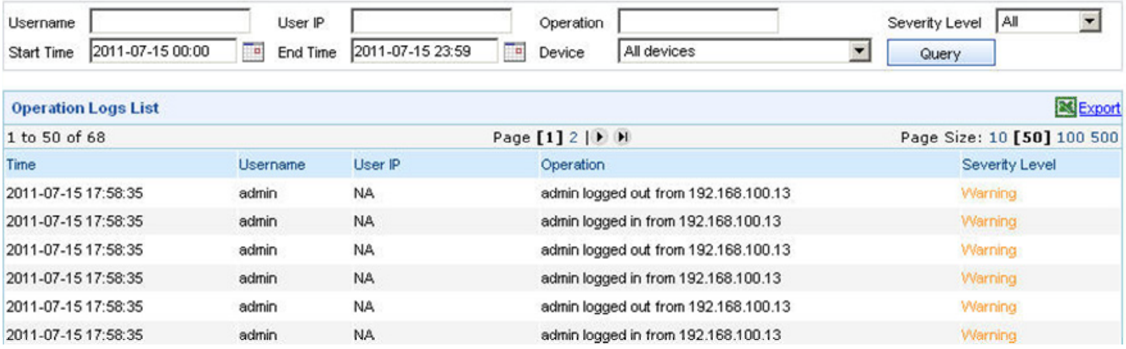
Operation log auditing

Configuration guide

From the navigation tree of the firewall management component, select **Operation Logs** under **Event Auditing** to enter the operation log auditing page, as shown in Figure 54. This page lists the logs in order of time, with the most recent log at the top. Each log records the operation's time, username, IP address of the PC used to access the system, operation performed, and alarm severity level.

Operation log auditing allows you to query operation logs by username, user IP, operation, severity level, time, and device group, helping you know the information of login users and track the users' operations.

Figure 54 Operation log auditing



Username		User IP		Operation		Severity Level	All
Start Time	2011-07-15 00:00	End Time	2011-07-15 23:59	Device	All devices		Query

Operation Logs List — Export

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Time	Username	User IP	Operation	Severity Level
2011-07-15 17:58:35	admin	NA	admin logged out from 192.168.100.13	Warning
2011-07-15 17:58:35	admin	NA	admin logged in from 192.168.100.13	Warning
2011-07-15 17:58:35	admin	NA	admin logged out from 192.168.100.13	Warning
2011-07-15 17:58:35	admin	NA	admin logged in from 192.168.100.13	Warning
2011-07-15 17:58:35	admin	NA	admin logged out from 192.168.100.13	Warning
2011-07-15 17:58:35	admin	NA	admin logged in from 192.168.100.13	Warning

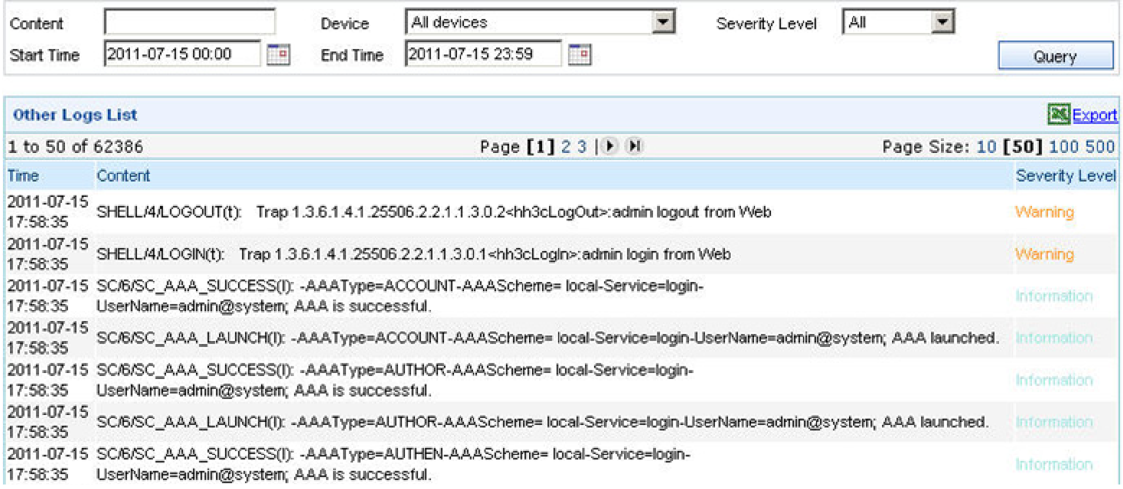
Other log auditing

Configuration guide

From the navigation tree of the firewall management component, select **Other Logs** under **Event Auditing** to enter the page for auditing other logs, as shown in Figure 55. The page lists the logs in order of time, with the most recent log at the top. Each log records the log time, content, and alarm severity level.

You can query the logs by content, device group, severity level, and time, so as to get an idea of other logs.

Figure 55 Other log auditing



Content		Device	All devices	Severity Level	All	
Start Time	2011-07-15 00:00	End Time	2011-07-15 23:59			Query

Other Logs List — Export

1 to 50 of 62386 — Page [1] 2 3 — Page Size: 10 [50] 100 500

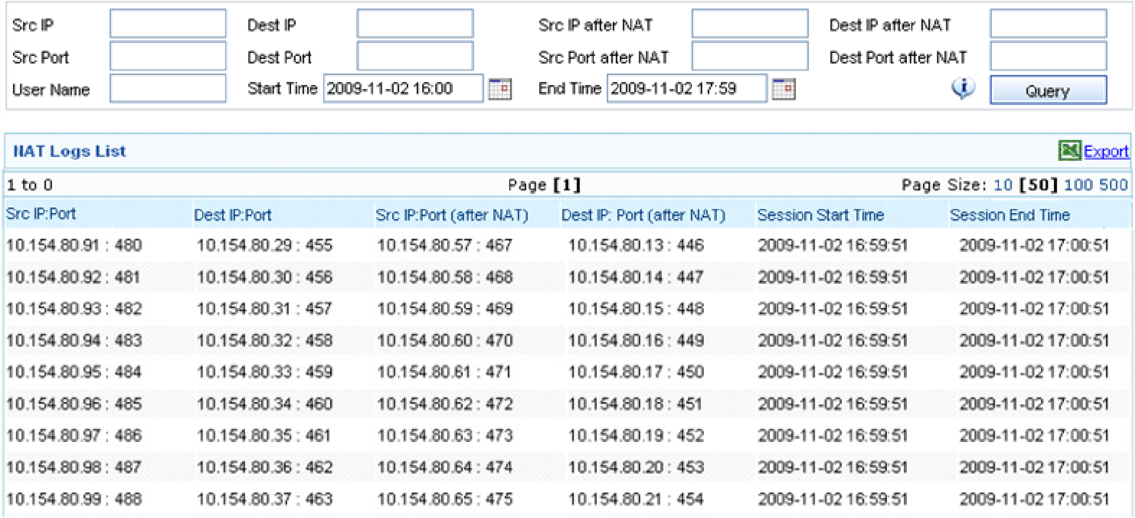
Time	Content	Severity Level
2011-07-15 17:58:35	SHELL/4/LOGOUT(t): Trap 1.3.6.1.4.1.25506.2.2.1.1.3.0.2<hh3cLogOut>:admin logout from Web	Warning
2011-07-15 17:58:35	SHELL/4/LOGIN(t): Trap 1.3.6.1.4.1.25506.2.2.1.1.3.0.1<hh3cLogIn>:admin login from Web	Warning
2011-07-15 17:58:35	SC/6/SC_AAA_SUCCESS(l): -AAAType=ACCOUNT-AAAScheme= local-Service=login-UserName=admin@system; AAA is successful.	Information
2011-07-15 17:58:35	SC/6/SC_AAA_LAUNCH(l): -AAAType=ACCOUNT-AAAScheme= local-Service=login-UserName=admin@system; AAA launched.	Information
2011-07-15 17:58:35	SC/6/SC_AAA_SUCCESS(l): -AAAType=AUTHOR-AAAScheme= local-Service=login-UserName=admin@system; AAA is successful.	Information
2011-07-15 17:58:35	SC/6/SC_AAA_LAUNCH(l): -AAAType=AUTHOR-AAAScheme= local-Service=login-UserName=admin@system; AAA launched.	Information
2011-07-15 17:58:35	SC/6/SC_AAA_SUCCESS(l): -AAAType=AUTHEN-AAAScheme= local-Service=login-UserName=admin@system; AAA is successful.	Information

NAT log auditing

Configuration guide

From the navigation tree of the firewall management component, select **NAT Logs** under **Event Auditing** to enter the NAT log auditing page, as shown in Figure 56. The page lists NAT logs of HP firewalls. Each log records the source IP:port and destination IP:port before and after network address translation, as well as the NAT session start time and end time.

Figure 56 NAT log auditing



Src IP		Dest IP		Src IP after NAT		Dest IP after NAT	
Src Port		Dest Port		Src Port after NAT		Dest Port after NAT	
User Name		Start Time	2009-11-02 16:00	End Time	2009-11-02 17:59		Query

NAT Logs List — Export

1 to 0 — Page [1] — Page Size: 10 [50] 100 500

Src IP:Port	Dest IP:Port	Src IP:Port (after NAT)	Dest IP: Port (after NAT)	Session Start Time	Session End Time
10.154.80.91 : 480	10.154.80.29 : 455	10.154.80.57 : 467	10.154.80.13 : 446	2009-11-02 16:59:51	2009-11-02 17:00:51
10.154.80.92 : 481	10.154.80.30 : 456	10.154.80.58 : 468	10.154.80.14 : 447	2009-11-02 16:59:51	2009-11-02 17:00:51
10.154.80.93 : 482	10.154.80.31 : 457	10.154.80.59 : 469	10.154.80.15 : 448	2009-11-02 16:59:51	2009-11-02 17:00:51
10.154.80.94 : 483	10.154.80.32 : 458	10.154.80.60 : 470	10.154.80.16 : 449	2009-11-02 16:59:51	2009-11-02 17:00:51
10.154.80.95 : 484	10.154.80.33 : 459	10.154.80.61 : 471	10.154.80.17 : 450	2009-11-02 16:59:51	2009-11-02 17:00:51
10.154.80.96 : 485	10.154.80.34 : 460	10.154.80.62 : 472	10.154.80.18 : 451	2009-11-02 16:59:51	2009-11-02 17:00:51
10.154.80.97 : 486	10.154.80.35 : 461	10.154.80.63 : 473	10.154.80.19 : 452	2009-11-02 16:59:51	2009-11-02 17:00:51
10.154.80.98 : 487	10.154.80.36 : 462	10.154.80.64 : 474	10.154.80.20 : 453	2009-11-02 16:59:51	2009-11-02 17:00:51
10.154.80.99 : 488	10.154.80.37 : 463	10.154.80.65 : 475	10.154.80.21 : 454	2009-11-02 16:59:51	2009-11-02 17:00:51

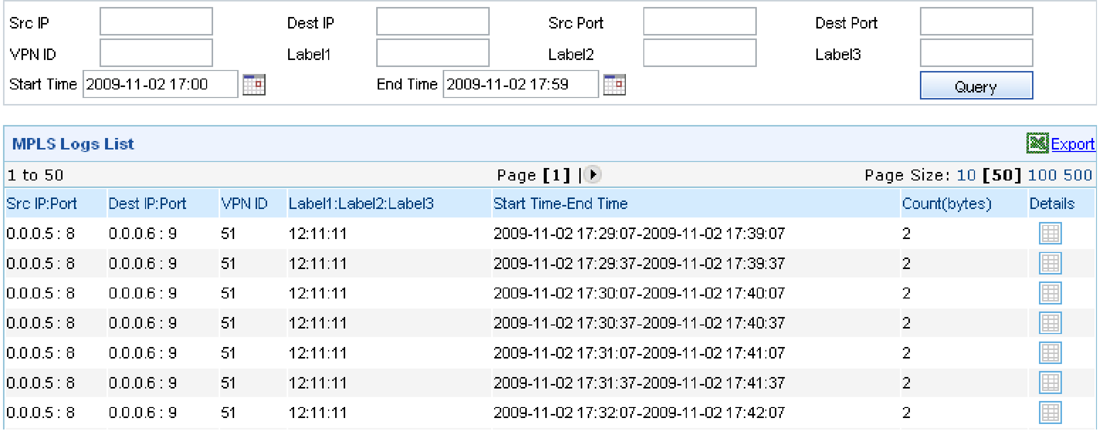
MPLS log auditing

Configuration guide

From the navigation tree of the firewall management component, select **MPLS Logs** under **Event Auditing** to enter the MPLS log auditing page, as shown in Figure 57. This page lists MPLS logs in detail. Each log records such information as source IP address and source port, destination IP address and port, VPN ID, time, and byte count.

MPLS log auditing allows you to query MPLS logs by source IP, destination IP, source port, destination port, VPN ID, labels, start time, and end time, helping you know the information of MPLS logs.

Figure 57 MPLS log auditing



Src IP		Dest IP		Src Port		Dest Port	
VPN ID		Label1		Label2		Label3	
Start Time	2009-11-02 17:00	End Time	2009-11-02 17:59				Query

MPLS Logs List — Export

1 to 50 Page [1] Page Size: 10 [50] 100 500

Src IP:Port	Dest IP:Port	VPN ID	Label1:Label2:Label3	Start Time-End Time	Count(bytes)	Details
0.0.0.5 : 8	0.0.0.6 : 9	51	12:11:11	2009-11-02 17:29:07-2009-11-02 17:39:07	2	▦
0.0.0.5 : 8	0.0.0.6 : 9	51	12:11:11	2009-11-02 17:29:37-2009-11-02 17:39:37	2	▦
0.0.0.5 : 8	0.0.0.6 : 9	51	12:11:11	2009-11-02 17:30:07-2009-11-02 17:40:07	2	▦
0.0.0.5 : 8	0.0.0.6 : 9	51	12:11:11	2009-11-02 17:30:37-2009-11-02 17:40:37	2	▦
0.0.0.5 : 8	0.0.0.6 : 9	51	12:11:11	2009-11-02 17:31:07-2009-11-02 17:41:07	2	▦
0.0.0.5 : 8	0.0.0.6 : 9	51	12:11:11	2009-11-02 17:31:37-2009-11-02 17:41:37	2	▦
0.0.0.5 : 8	0.0.0.6 : 9	51	12:11:11	2009-11-02 17:32:07-2009-11-02 17:42:07	2	▦

NOTE:

If the IP address/port number is null in the database, NA will be displayed in the IP address or port field.

Security policy management

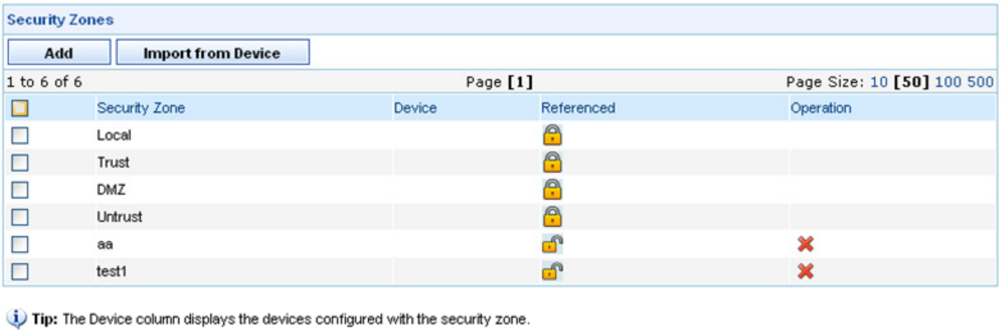
This function allows you to configure security policies for the firewall devices, so that the devices can automatically identify and filter network traffic that travel through the devices. More specifically, this function allows you to configure a series of rules to match packets between a source security zone and a destination security zone, and permit or drop the matched packets.

Security zones

Configuration guide

From the navigation tree of the firewall management component, select **Security Zones** under **Security Policy Management** to enter the security zone management page, as shown in Figure 58. Table 61 describes the security zone management functions available on the page.

Figure 58 Security zone management page



Security Zones

1 to 6 of 6 Page [1] Page Size: 10 [50] 100 500

□	Security Zone	Device	Referenced	Operation
□	Local		🔒	
□	Trust		🔒	
□	DMZ		🔒	
□	Untrust		🔒	
□	aa		🔓	✖
□	test1		🔓	✖

Tip: The Device column displays the devices configured with the security zone.

Table 61 Security zone management functions

Function	Description
Security zone list	Allows you to view the detailed information of all security zones.

Adding a security zone	Allows you to add a security zone.
Importing security zones from a device	Allows you to import security zones from a device.
Deleting security zones	Allows you to delete security zones. Follow these steps: 1. Select the check boxes before the security zones to be deleted. 2. Click **Delete**.

CAUTION:

- Security zones **Local**, **Trust**, **DMZ**, and **Untrust** are system predefined security zones and cannot be deleted.
- Security zones that have been referenced cannot be deleted.

Security zone list

The security zone list is on the security zone management page, as shown in Figure 58. Table 62 describes the fields of the list.

Table 62 Fields of the security zone list

Field	Description
Security Zone	Name of the security zone
Device	Device that is configured with the security zone
Referenced	Whether the security zone is referenced or not
Operation	Click the ✖ icon to delete the security zone.

Return to Security zone management functions.

Adding a security zone

From the navigation tree of the firewall management component, select **Security Zones** under **Security Policy Management** to enter the security zone management page, as shown in Figure 58. Click **Add** to enter the **Add Security Zone** page, type a name for the security zone, and click **Add**.

Figure 59 Add a security zone

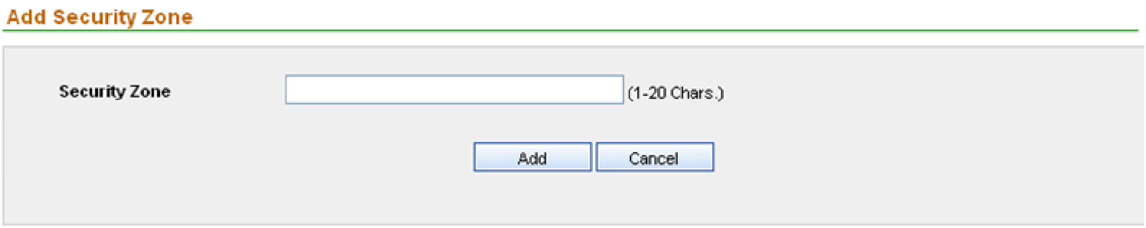


Table 63 Security zone configuration item

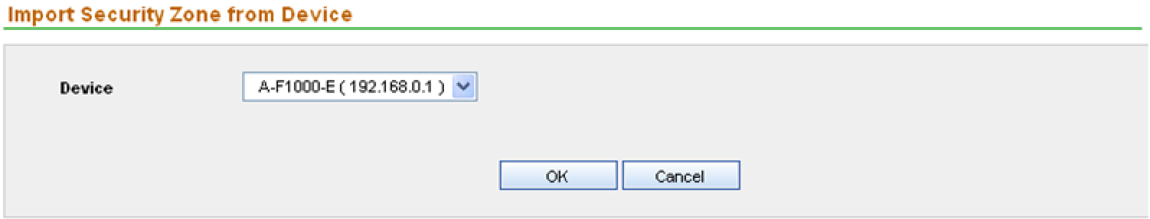
Item	Description
Security Zone	Type a name for the security zone. A security zone name cannot contain any of these characters: ^'<>&:;"/\

Return to Security zone management functions.

Importing security zones from a device

From the navigation tree of the firewall management component, select **Security Zones** under **Security Policy Management** to enter the security zone management page, as shown in Figure 58. Click **Import from Device** to enter the **Import Security Zone from Device** page, select a device, and click **OK**.

Figure 60 Import security zones from a device



Import Security Zone from Device

Device: A-F1000-E (192.168.0.1)

△ CAUTION:

Available devices are those added in the device management module of the firewall management component.

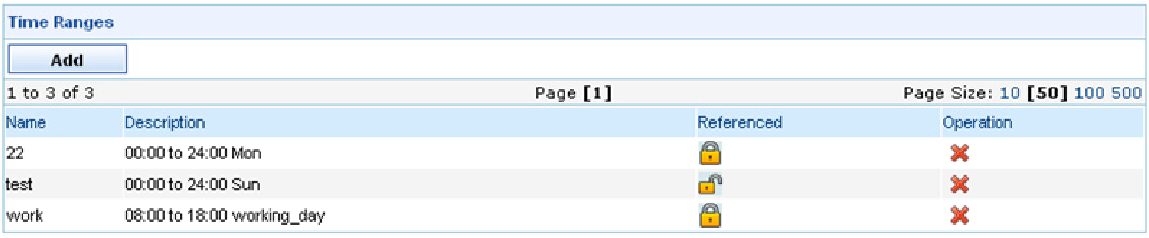
Return to Security zone management functions.

Time ranges

Configuration guide

From the navigation tree of the firewall management component, select **Time Ranges** under **Security Policy Management** to enter the time range management page, as shown in Figure 61. Table 64 describes the functions available on the page.

Figure 61 Time range management page



Time Ranges

1 to 3 of 3 Page [1] Page Size: 10 [50] 100 500

Name	Description	Referenced	Operation
22	00:00 to 24:00 Mon	🔒	✖
test	00:00 to 24:00 Sun	🔓	✖
work	08:00 to 18:00 working_day	🔒	✖

Table 64 Time range management functions

Function	Description
Time range list	Allows you to view the detailed information of all time ranges.
Adding a time range	Allows you to add a time range.

Deleting a time range	Allows you to click the ✖ icon of a time range to delete the time range.

Time range list

The time range list is on the time range management page, as shown in Figure 61. Figure 62 describes the fields of the list.

Table 65 Fields of the time range list

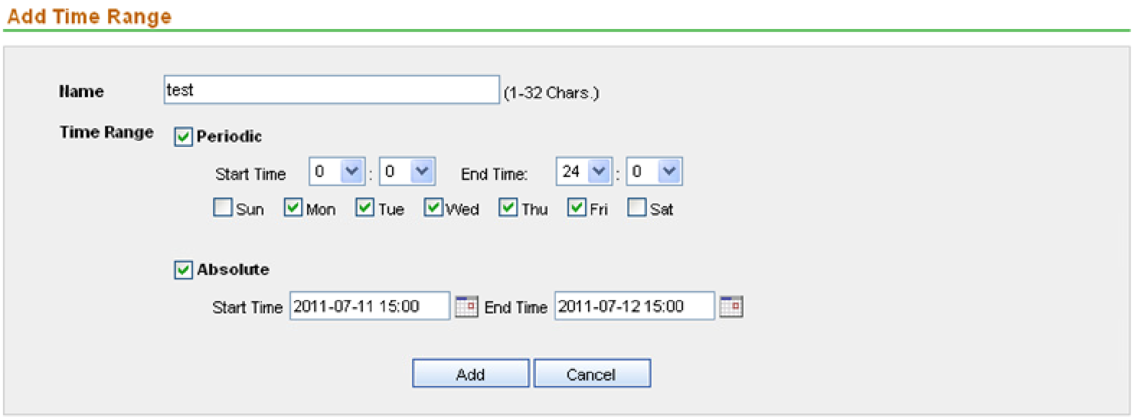
Field	Description
Name	Name of the time range
Description	Time periods that the time range covers
Referenced	Whether the time range is referenced by a security policy or not
Operation	Click the ✖ icon to delete the time range.

Return to Time range management functions.

Adding a time range

From the navigation tree of the firewall management component, select **Time Ranges** under **Security Policy Management** to enter the time range management page, as shown in Figure 61. Click **Add** to enter the **Add Time Range** page, configure the time range as described in Table 66, and click **Add**.

Figure 62 Add a time range



Add Time Range

Name: test (1-32 Chars.)

Time Range: ☑ Periodic

Start Time 0 : 0 End Time: 24 : 0

□ Sun ☑ Mon ☑ Tue ☑ Wed ☑ Thu ☑ Fri □ Sat

☑ Absolute

Start Time 2011-07-11 15:00 End Time 2011-07-12 15:00

Table 66 Time range configuration item

Item	Description
Name	Required Type a name for the time range. The name can't be null and can't contain any of these characters: ? < > \" % ' & #.
Time Range	Required Specify the time periods during which a security policy that references the time range take effect. A time period can be periodic or absolute: • Periodic—Select the start time and end time for the periodic time period,

	and then select the days of the week during which the time period applies. By default, the periodic time period is from 0:0 to 24:0 every day. • Absolute—Select the start time and end time for the absolute time period. By default, the absolute time period is a 24-hour period starting from the full hour of the current time. An absolute time range takes effect only once.

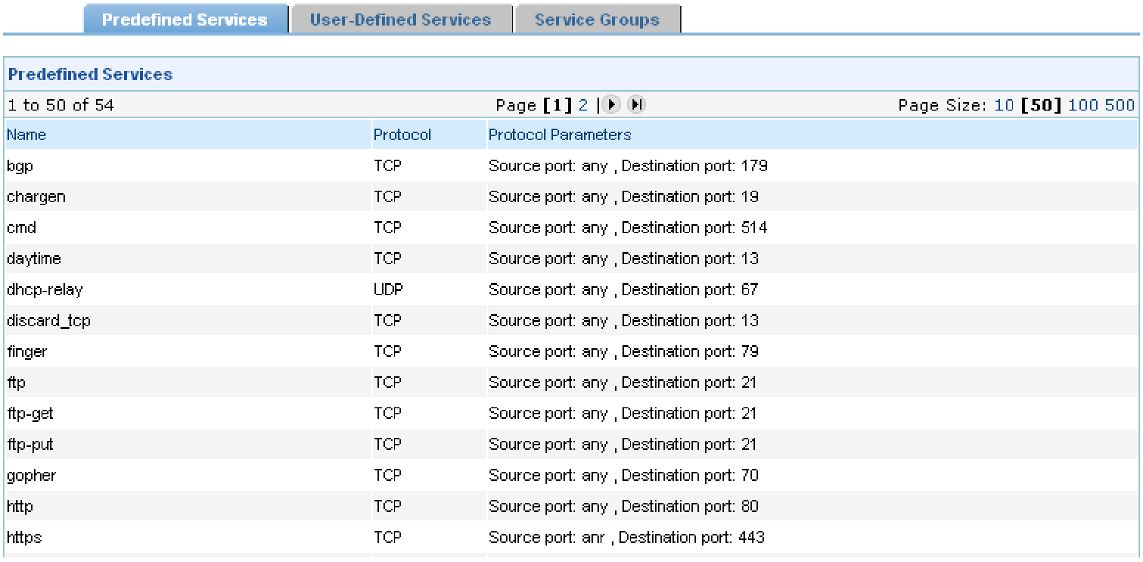
Return to Time range management functions.

Services

Configuration guide

From the navigation tree of the firewall management component, select **Services** under **Security Policy Management**. The predefined service management page appears, as shown in Figure 63. Table 67 describes the functions of the tabs.

Figure 63 Service management page



Predefined Services

1 to 50 of 54 Page [1] 2 Page Size: 10 [50] 100 500

Name	Protocol	Protocol Parameters
bgp	TCP	Source port: any , Destination port: 179
chargen	TCP	Source port: any , Destination port: 19
cmd	TCP	Source port: any , Destination port: 514
daytime	TCP	Source port: any , Destination port: 13
dhcp-relay	UDP	Source port: any , Destination port: 67
discard_tcp	TCP	Source port: any , Destination port: 13
finger	TCP	Source port: any , Destination port: 79
ftp	TCP	Source port: any , Destination port: 21
ftp-get	TCP	Source port: any , Destination port: 21
ftp-put	TCP	Source port: any , Destination port: 21
gopher	TCP	Source port: any , Destination port: 70
http	TCP	Source port: any , Destination port: 80
https	TCP	Source port: anr , Destination port: 443

Table 67 Service management functions

Function	Description
Predefined services	Allows you to view the detailed information of all predefined services.
User-defined services	Allows you to manage user-defined services.
Service groups	Allows you to manage service groups.

Predefined services

The predefined services are displayed by default when you select **Services** under **Security Policy Management**. See Figure 63. You can view predefined services but cannot delete or modify them. Table 68 describes the fields of the service list.

Table 68 Fields of the predefined service list

Field	Description
Name	Name of the service

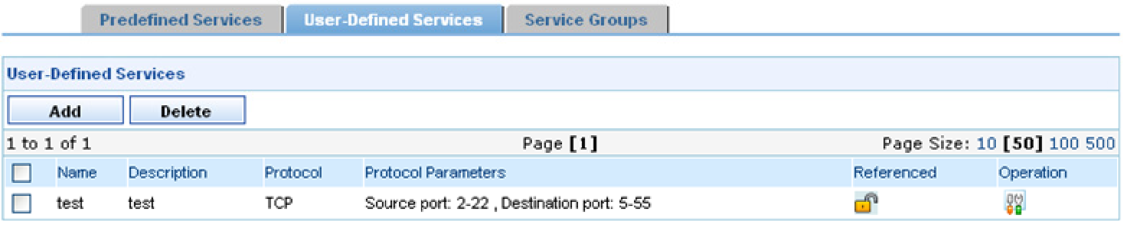
Protocol	Protocol used by the service
Protocol Parameters	Parameters configured for the protocol

Return to Service management functions.

User-defined services

From the navigation tree of the firewall management component, select **Services** under **Security Policy Management**. Click the **User-Defined Services** tab to enter the user-defined service management page, as shown in Figure 64. Table 69 describes the fields of the service list.

Figure 64 User-defined service management page



□	Name	Description	Protocol	Protocol Parameters	Referenced	Operation
□	test	test	TCP	Source port: 2-22 , Destination port: 5-55	🔓	

Table 69 Fields of the user-defined service list

Field	Description
Name	Name of the user-defined service
Description	Descriptive information about the user-defined service
Protocol	Protocol used by the user-defined service
Protocol Parameters	Parameters configured for the protocol
Referenced	Whether the user-defined service is referenced or not
Operation	Click the icon to modify the service.

To add a user-define service, click **Add** on the user-defined service management page to enter the **Add User-Defined Service** page and configure the service as described in Table 70.

Figure 65 Add a user-defined service

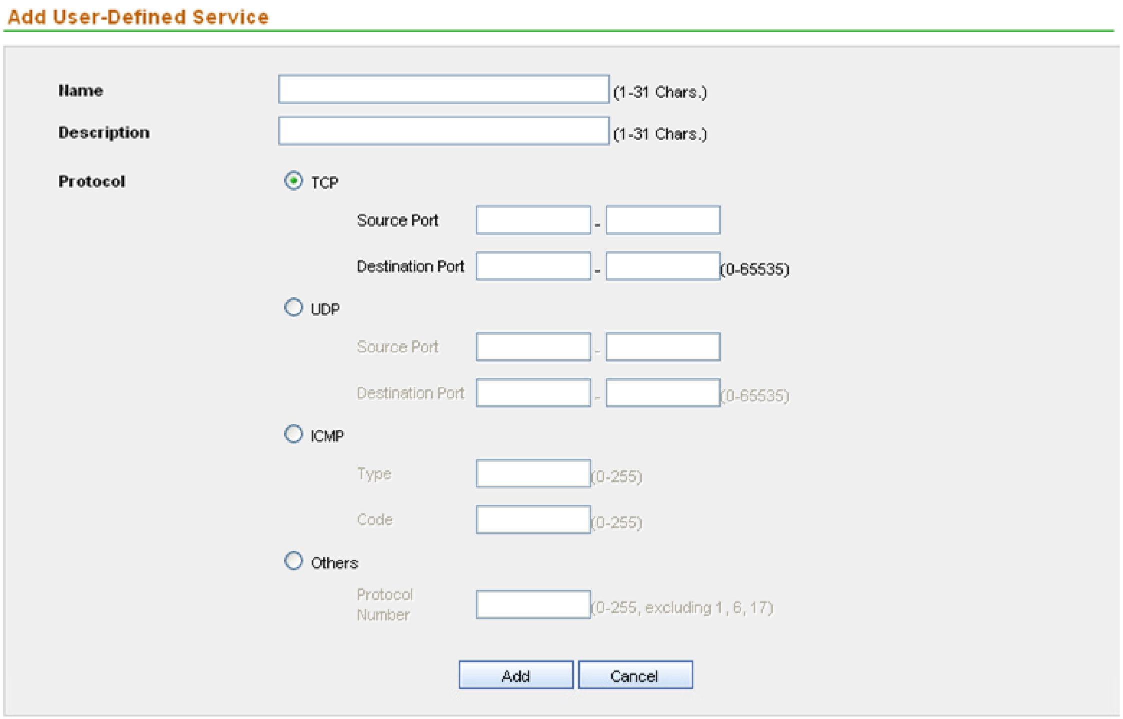


Table 70 User-defined service configuration items

Item	Description
Name	Required Type a name for the user-defined service. Valid characters for the name: letters, digits, underscores (_), periods (.), slashes (/), and hyphens (-), where underscores can't appear at the beginning or end of the name.
Description	Optional Type some descriptive information for the user-defined service. Valid characters for the description: letters, digits, blank spaces, colons (:), underscores (_), commas (,), periods (.), exclamatory marks (!), and hyphens (-), where underscores can't appear at the beginning or end of the name.
Protocol	Required Configure the protocol information for the user-define service. Select **TCP**, **UDP**, **ICMP** or **Others**. • If you select **TCP**, specify the source port and the destination port, in the range 0 to 65535. • If you select **UDP**, specify the source port and the destination port, in the range 0 to 65535. • If you select **ICMP**, specify the protocol type and the code, in the range 0 to 255. • If you select **Others**, type the protocol number, in the range 0 to 255 except 1, 6, and 17.

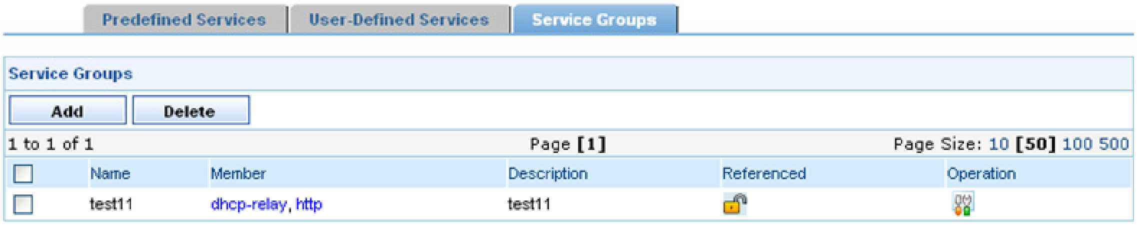
To delete user-defined services, select them and click **Delete** on the user-defined service management page.

Return to Service management functions.

Service groups

From the navigation tree of the firewall management component, select **Services** under **Security Policy Management**. Click the **Service Groups** tab to enter the service group management page, as shown in Figure 66. Table 71 describes the fields of the service group list.

Figure 66 Service group management page



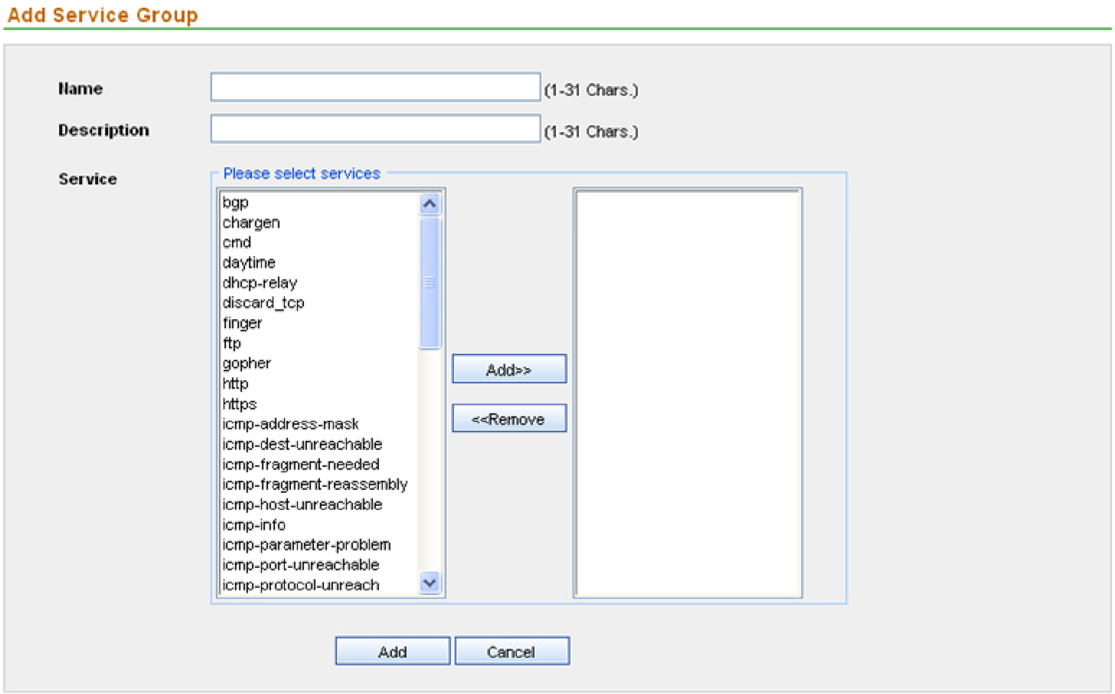
□	Name	Member	Description	Referenced	Operation
□	test11	dhcp-relay, http	test11	🔓	⚙

Table 71 Fields of the service group list

Field	Description
Name	Name of the service group
Member	Services in the service group
Description	Descriptive information about the service group
Referenced	Whether the service group is referenced or not
Operation	Click the ⚙ icon to modify the service group.

To add a service group, click **Add** on the service group management page to enter the **Add Service Group** page and configure the service group as described in Table 72.

Figure 67 Add a service group



Add Service Group

Name (1-31 Chars.)

Description (1-31 Chars.)

Service

Please select services

bgp
chargen
cmd
daytime
dhcp-relay
discard_tcp
finger
ftp
gopher
http
https
icmp-address-mask
icmp-dest-unreachable
icmp-fragment-needed
icmp-fragment-reassembly
icmp-host-unreachable
icmp-info
icmp-parameter-problem
icmp-port-unreachable
icmp-protocol-unreach

Table 72 Service group configuration items

Item	Description
Name	Required Type a name for the service group. Valid characters for the name: letters, digits, underscores (_), periods (.), slashes (/), and hyphens (-), where underscores can't appear at the beginning or end of the name.
Description	Optional Type some descriptive information for the service group. Valid characters for the description: letters, digits, blank spaces, colons (:), underscores (_), commas (,), periods (.), exclamatory marks (!), and hyphens (-), where underscores can't appear at the beginning or end of the name.
Service	Required Add services to the service group. • Available services are listed in the left box, including all predefined services and user-defined services. The right box lists the services to be added to the service group. • You can select one or more services in the left box and then click **Add>>** to add them to the right box. You can also select one or more services in the right box and click **<<Remove** to remove them from the right box to the left box.

To delete service groups, select them and click **Delete** on the service group management page.

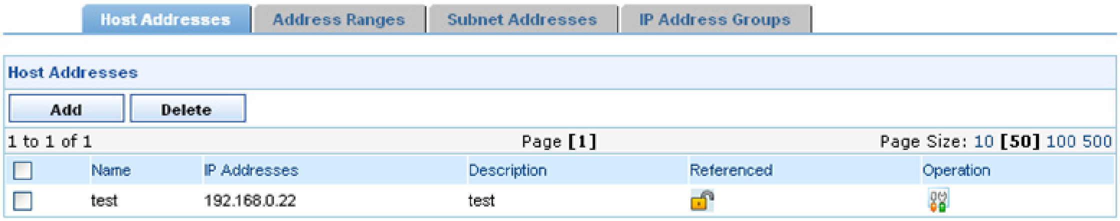
Return to Service management functions.

IP addresses

Configuration guide

From the navigation tree of the firewall management component, select **IP Addresses** under **Security Policy Management** to enter the IP address management page, as shown in Figure 68. Table 73 describes the functions of the tabs.

Figure 68 IP address management page



Host Addresses

1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

□	Name	IP Addresses	Description	Referenced	Operation
□	test	192.168.0.22	test		

Table 73 IP address management functions

Function	Description
Host addresses	Allows you to manage all host addresses in the system.
Address ranges	Allows you to manage all address ranges in the system.
Subnet addresses	Allows you to manage all subnet addresses in the system.
IP address groups	Allows you to manage all IP address groups in the system.

Host addresses

From the navigation tree of the firewall management component, select **IP Addresses** under **Security Policy Management**. The host address list is on the lower part, as shown in Figure 68. Table 74 describes the fields of the list.

Table 74 Fields of the host address list

Field	Description
Name	Name of the host address
IP Addresses	All IP addresses for the host address
Description	Descriptive information about the host address
Referenced	Whether the host address is referenced or not
Operation	Click the icon to modify the IP addresses for the host address.

To add a host address, click **Add** on the host address management page to enter the **Add Host Address** page and configure the host address as shown in Table 75.

Figure 69 Add a host address

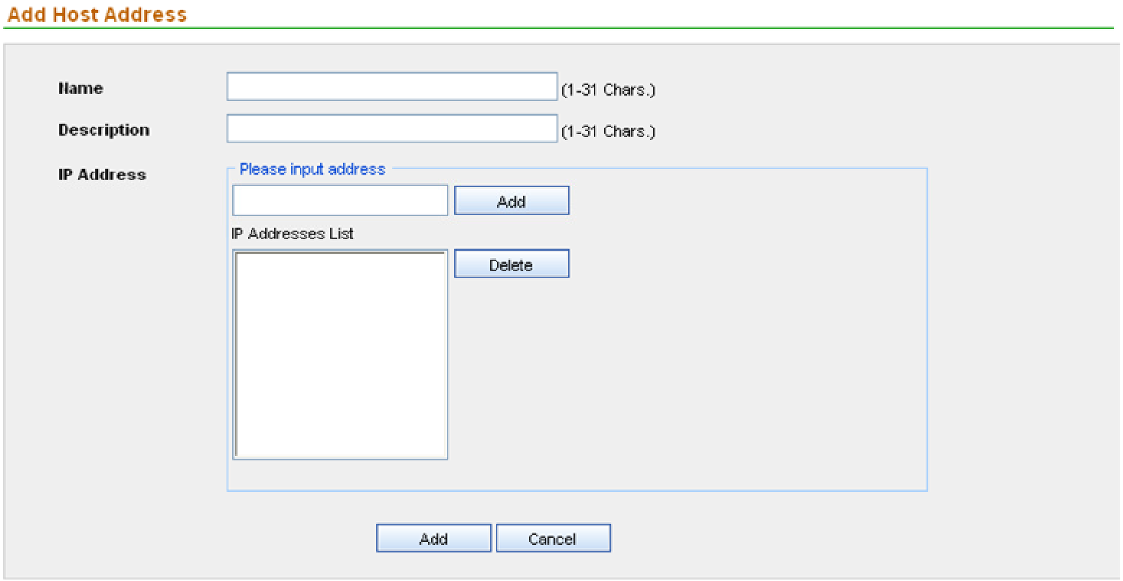


Table 75 Host address configuration items

Item	Description
Name	Required Type a name for the host address. Valid characters for the name: letters, digits, underscores (_), periods (.), slashes (/), and hyphens (-), where underscores can't appear at the beginning or end of the name. IMPORTANT: The name must be unique in the system. It cannot be the same as the name of an existing host address, address range, subnet address, or IP address group.
Description	Optional Type some descriptive information for the host address. Valid characters for the description: letters, digits, blank spaces, colons (:), underscores (_), commas (,), periods (.), exclamatory marks (!), and hyphens (-), where underscores can't appear at the beginning or end of the name.
IP Address	Required Specify IP addresses for the host address. • Input an IP address and click **Add** next to the text box to add the IP address to the IP addresses list. You can also select an IP address on the list and click **Delete** to remove the IP address from the list. • The IP addresses must be in dotted decimal notation.

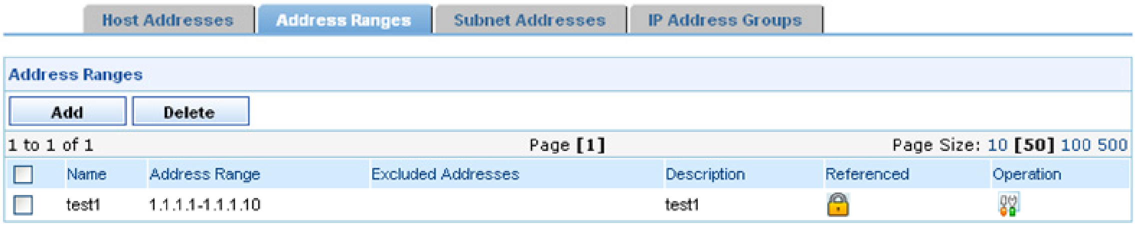
To delete host addresses, select them and click **Delete** on the host address management page.

Return to IP address management functions.

Address ranges

From the navigation tree of the firewall management component, select **IP Addresses** under **Security Policy Management**. Click the **Address Ranges** tab to enter the address range management page, as shown in Figure 70. Table 76 describes the fields of the address range list.

Figure 70 Address range management page



1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

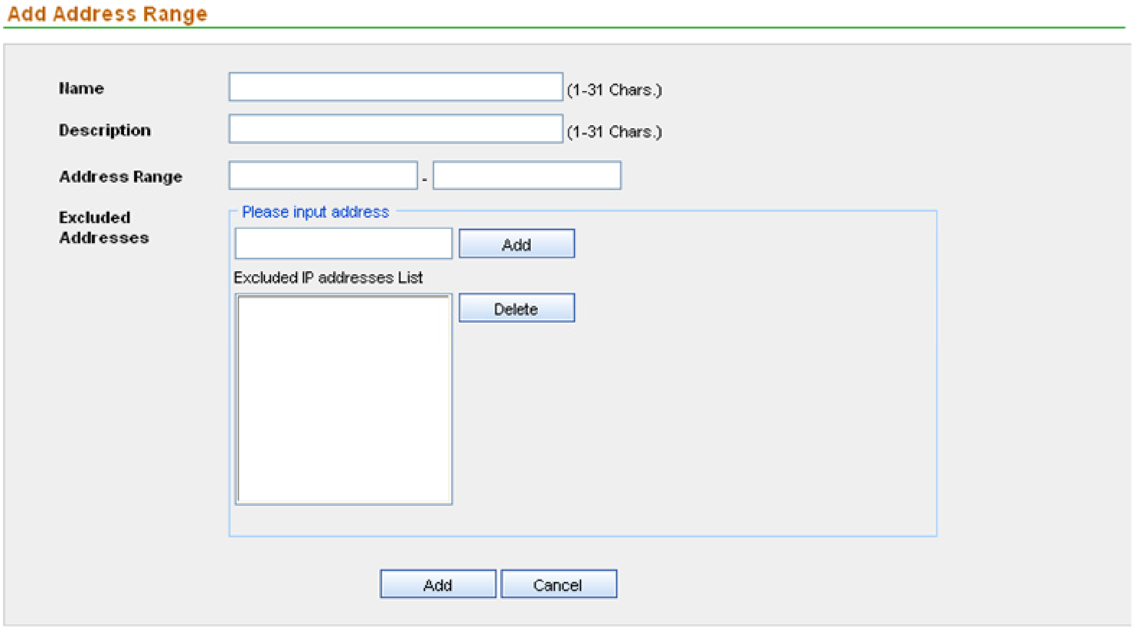
□	Name	Address Range	Excluded Addresses	Description	Referenced	Operation
□	test1	1.1.1.1-1.1.1.10		test1	🔒	⚙

Table 76 Fields of the address range list

Field	Description
Name	Name of the address range
Address Range	Specific address range
Excluded Addresses	Excluded addresses in the address range
Description	Descriptive information about the address range
Referenced	Whether the address range is referenced or not
Operation	Click the ⚙ icon to modify the address range.

To add an address range, click **Add** on the address range management page to enter the **Add Address Range** page and configure the range as shown in Figure 71 and Table 77.

Figure 71 Add an address range



Name (1-31 Chars.)

Description (1-31 Chars.)

Address Range -

Excluded Addresses

Table 77 Address range configuration items

Item	Description
Name	Required Type a name for the address range. Valid characters for the name: letters, digits, underscores (_), periods (.), slashes (/), and hyphens (-), where underscores can't appear at the beginning or end of the name. IMPORTANT: The name must be unique in the system. It cannot be the same as the name of an existing host address, address range, subnet address, or IP address group.
Description	Optional Type some descriptive information for the address range. Valid characters for the description: letters, digits, blank spaces, colons (:), underscores (_), commas (,), periods (.), exclamatory marks (!), and hyphens (-), where underscores can't appear at the beginning or end of the name.
Address Range	Required Set the start IP address and end IP address of the address range. The IP addresses must be in dotted decimal notation.
Excluded Addresses	Required Specify the IP addresses to be excluded from the address range. • Input an IP address and click **Add** next to the text box to add the IP address to the excluded IP addresses list. You can also select an IP address on the list and click **Delete** to remove the IP address from the list. • The IP addresses must be in dotted decimal notation.

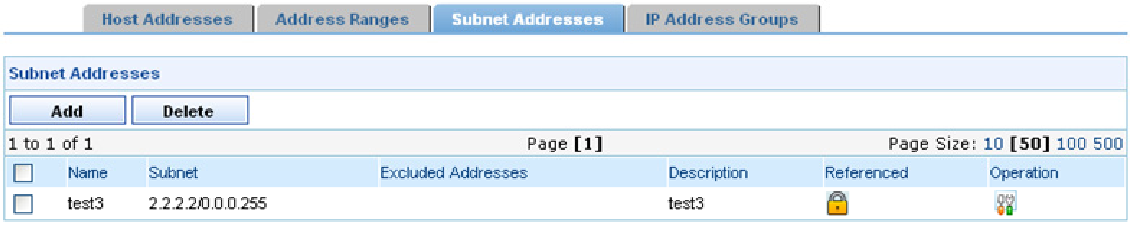
To delete address ranges, select them and click **Delete** on the address range management page.

Return to IP address management functions.

Subnet addresses

From the navigation tree of the firewall management component, select **IP Addresses** under **Security Policy Management**. Click the **Subnet Addresses** tab to enter the subnet address management page, as shown in Figure 72. Table 78 describes the fields of the subnet address list.

Figure 72 Subnet address management page



1 to 1 of 1 Page [1] Page Size: 10 [50] 100 500

□	Name	Subnet	Excluded Addresses	Description	Referenced	Operation
□	test3	2.2.2.2/0.0.0.255		test3	🔒	

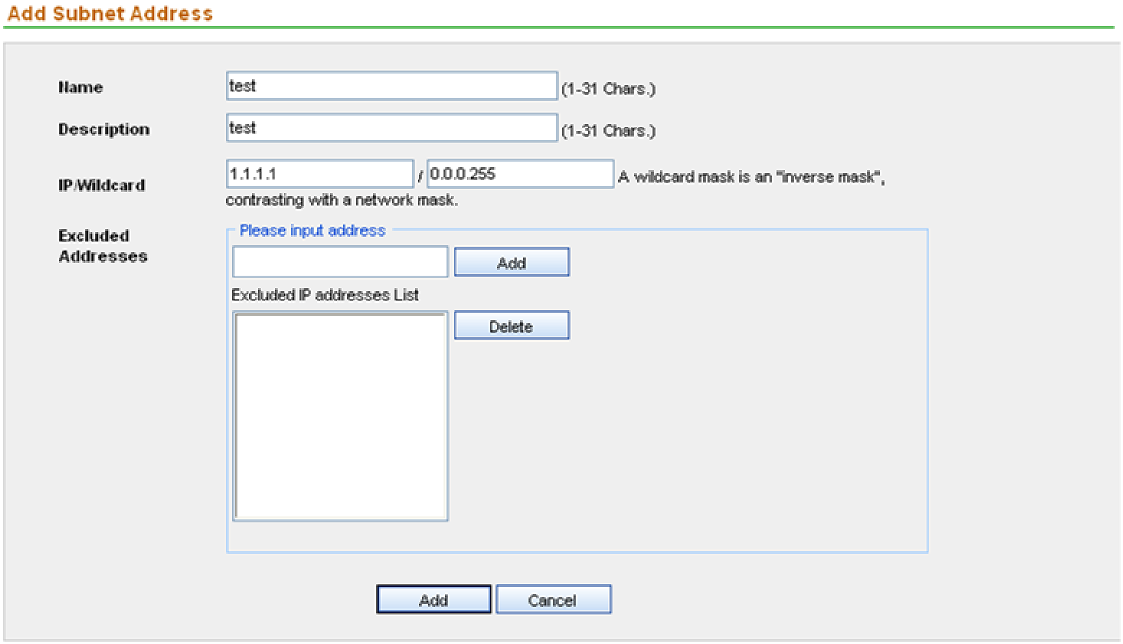
Table 78 Fields of the subnet address list

Field	Description
Name	Name of the subnet address

Subnet	Subnet address and mask
Excluded Addresses	Addresses excluded from the subnet
Description	Descriptive information about the subnet address
Referenced	Whether the subnet address is referenced or not
Operation	Click the icon to modify the subnet address.

To add a subnet address, click **Add** on the subnet address management page to enter the **Add Subnet Address** page and configure the subnet address as shown in Figure 73 and Table 79.

Figure 73 Add an subnet address



Add Subnet Address

Name: test (1-31 Chars.)

Description: test (1-31 Chars.)

IP/Wildcard: 1.1.1.1 / 0.0.0.255 A wildcard mask is an "inverse mask", contrasting with a network mask.

Excluded Addresses: Please input address

Excluded IP addresses List

Table 79 Subnet address configuration items

Item	Description
Name	Required Type a name for the subnet address. Valid characters for the name: letters, digits, underscores (_), periods (.), slashes (/), and hyphens (-), where underscores can't appear at the beginning or end of the name. ⓘ IMPORTANT: The name must be unique in the system. It cannot be the same as the name of an existing host address, address range, subnet address, or IP address group.
Description	Optional Type some descriptive information for the subnet address. Valid characters for the description: letters, digits, blank spaces, colons (:), underscores (_), commas (,), periods (.), exclamatory marks (!), and hyphens (-), where underscores can't appear at the beginning or end of the name.
IP Address	Required

	Specify a subnet address. The IP address must be in dotted decimal notation.
Wildcard	Required Select a wildcard mask for the subnet address.
Excluded Addresses	Required Specify the IP addresses to be excluded from the subnet. • Input an IP address and click **Add** next to the text box to add the IP address to the excluded IP addresses list. You can also select an IP address on the list and click **Delete** to remove the IP address from the list. • The IP addresses must be in dotted decimal notation.

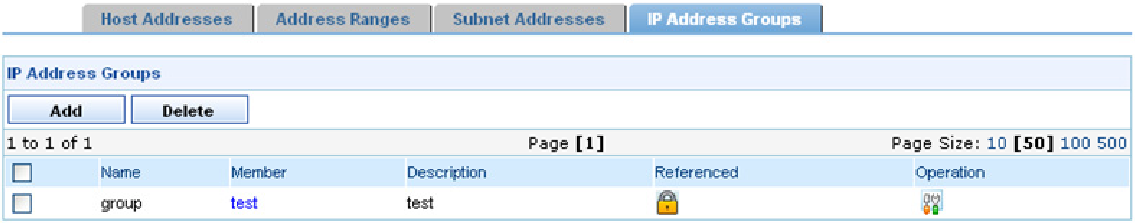
To delete subnet addresses, select them and click **Delete** on the subnet address management page.

Return to IP address management functions.

IP address groups

From the navigation tree of the firewall management component, select **IP Addresses** under **Security Policy Management**. Click the **IP Address Groups** tab to enter the IP address group management page, as shown in Figure 74. Table 80 describes the fields of the IP address group list.

Figure 74 IP address group management page



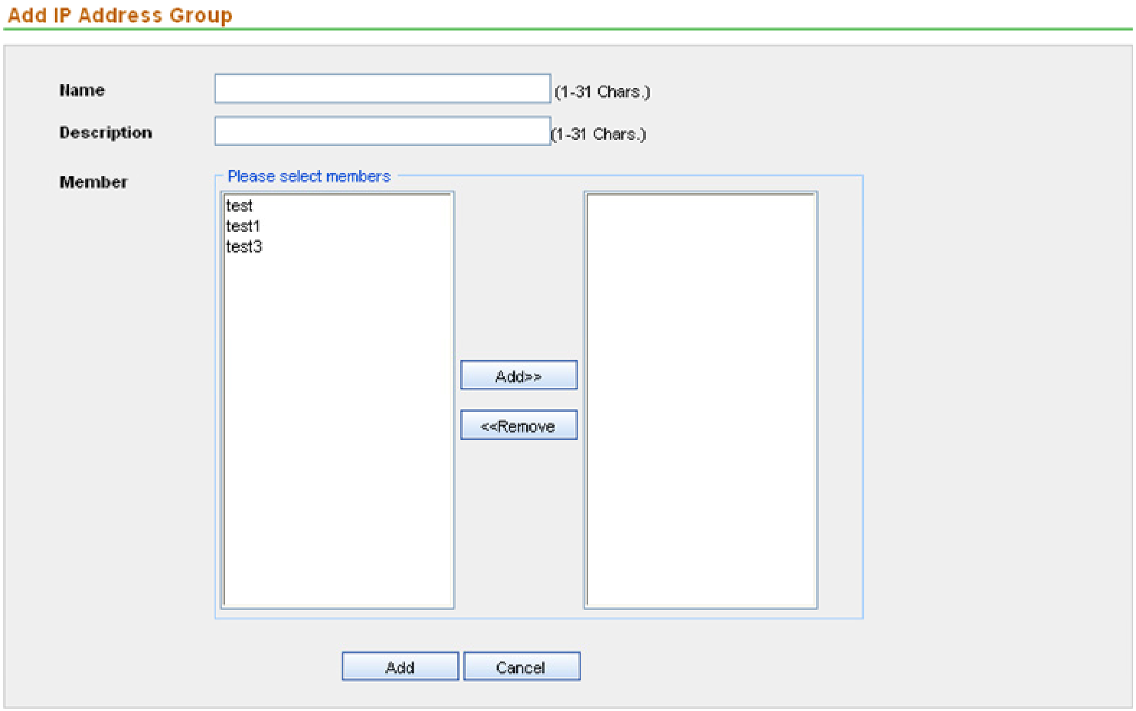
□	Name	Member	Description	Referenced	Operation
□	group	test	test	🔒	

Table 80 Fields of the IP address group list

Field	Description
Name	Name of the IP address group
Member	Names of the members in the IP address group
Description	Descriptive information about the IP address group
Referenced	Whether the IP address group is referenced or not
Operation	Click the icon to modify the IP address group.

To add an IP address group, click **Add** on the IP address group management page to enter the **Add IP Address Group** page and configure the IP address group as shown in Figure 75 and Table 81.

Figure 75 Add an IP address group


Add IP Address Group

Name (1-31 Chars.)

Description (1-31 Chars.)

Member

Please select members

test
test1
test3

Table 81 IP address group configuration items

Item	Description
Name	Required Type a name for the IP address group. Valid characters for the name: letters, digits, underscores (_), periods (.), slashes (/), and hyphens (-), where underscores can't appear at the beginning or end of the name. ⓘ IMPORTANT: The name must be unique in the system. It cannot be the same as the name of an existing host address, address range, subnet address, or IP address group.
Description	Optional Type some descriptive information for the IP address group. Valid characters for the description: letters, digits, blank spaces, colons (:), underscores (_), commas (,), periods (.), exclamatory marks (!), and hyphens (-), where underscores can't appear at the beginning or end of the name.
Member	Required Add members to the IP address group. • Available members are listed in the left box, including all added IP addresses. The right box lists the members to be added to the IP address group. • You can select one or more members in the left box and then click **Add>>** to add them to the right box. You can also select one or more members in the right box and click **<<Remove** to remove them from the right box to the left box.

To delete IP address groups, select them and click **Delete** on the IP address group management page.

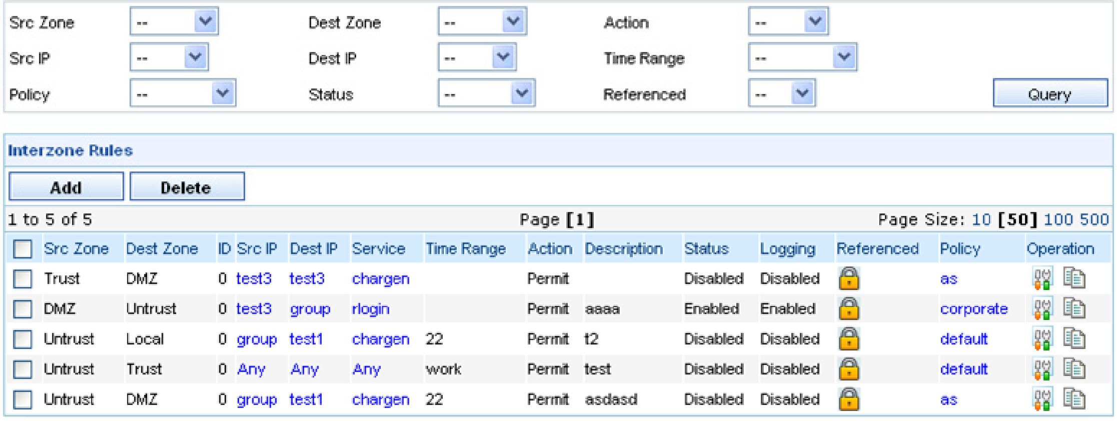
Return to IP address management functions.

Interzone rules

Configuration guide

From the navigation tree of the firewall management component, select **Interzone Rules** under **Security Policy Management** to enter the interzone rule management page, as shown in Figure 76. Table 82 describes the functions available on the page.

Figure 76 Interzone rule management page



Src Zone	--	Dest Zone	--	Action	--	
Src IP	--	Dest IP	--	Time Range	--	
Policy	--	Status	--	Referenced	--	Query

Interzone Rules

Add Delete

1 to 5 of 5 Page [1] Page Size: 10 [50] 100 500

□	Src Zone	Dest Zone	ID	Src IP	Dest IP	Service	Time Range	Action	Description	Status	Logging	Referenced	Policy	Operation
□	Trust	DMZ	0	test3	test3	chargen		Permit		Disabled	Disabled	🔒	as	
□	DMZ	Untrust	0	test3	group	rlogin		Permit	aaaa	Enabled	Enabled	🔒	corporate	
□	Untrust	Local	0	group	test1	chargen	22	Permit	t2	Disabled	Disabled	🔒	default	
□	Untrust	Trust	0	Any	Any	Any	work	Permit	test	Disabled	Disabled	🔒	default	
□	Untrust	DMZ	0	group	test1	chargen	22	Permit	asdasd	Disabled	Disabled	🔒	as	

Table 82 Interzone rule management functions

Function	Description
Interzone rule list	Allows you to view all interzone rules in the system.
Adding an interzone rule	Allows you to add an interzone rule.
Deleting interzone rules	Allows you to delete interzone rules. Follow these steps: 3. Select the check boxes before the interzone rules to be deleted. 4. Click **Delete**. ⓘ IMPORTANT: Interzone rules that are referenced cannot be deleted.

Interzone rule list

From the navigation tree of the firewall management component, select **Interzone Rules** under **Security Policy Management**. The interzone rule list is at the lower part. See Figure 76. This list includes all interzone rules in the system. Table 83 describes the interzone rule query options and Table 84 describes the fields of the interzone rule list.

Table 83 Interzone rule query options

Option	Description
Src Zone	Query interzone rules by source zone.
Dest Zone	Query interzone rules by destination zone.
Action	Query interzone rules by filtering action.
Src IP	Query interzone rules by source IP.

Dest IP	Query interzone rules by destination IP.
Time Range	Query interzone rules by time range.
Policy	Query interzone rules by policy.
Status	Query interzone rules by status (enabled, disabled, or both)
Referenced	Query interzone rules by reference status (referenced, not referenced, or both)

Table 84 Fields of the interzone rule list

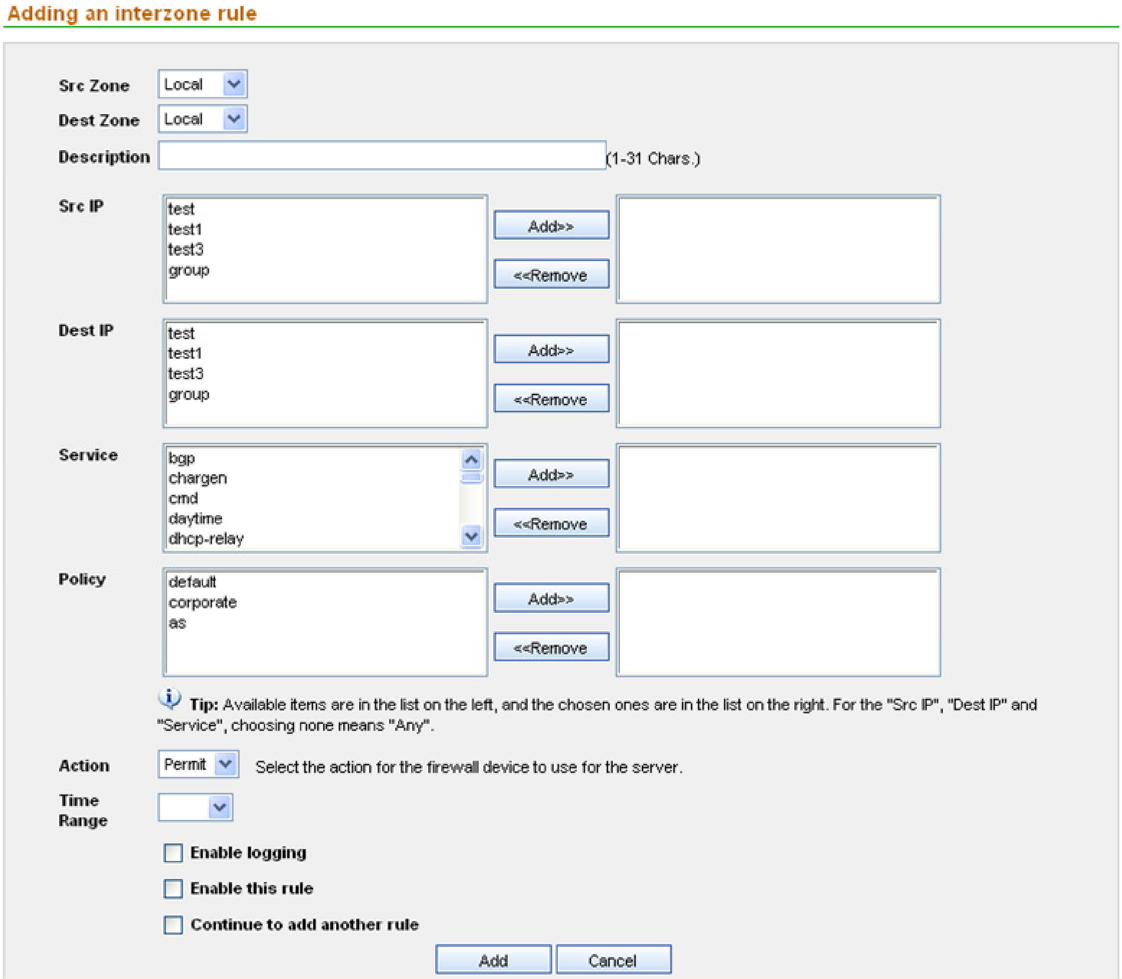
Filed	Description
Src Zone	Source zone of the interzone rule
Dest Zone	Destination zone of the interzone rule
ID	ID of the interzone rule When you create an interzone rule, the system automatically assigns an ID to the rule according to the number of existing rules for the source zone and destination zone pair, starting from 0. For example, the first rule created for the source zone Trust and the destination zone DMZ is numbered 0, the second rule created for the same source zone and destination zone pair is numbered 1.
Src IP	Source IP address of the interzone rule
Dest IP	Destination IP address of the interzone rule
Service	All services of the interzone rule
Time Range	Time range during which the interzone rule takes effect
Action	Filtering action of the interzone rule
Description	Descriptive information about the interzone rule
Status	Whether the interzone rule is enabled or disabled
Logging	Whether logging is enabled for the interzone rule
Referenced	Whether the interzone rule is referenced or not
Policy	Policies that the interzone rule is in. You can click a policy name to enter the page for managing the policy's rules. See "Rule management."
Operation	• Click the icon to modify the interzone rule. • Click the icon to copy the interzone rule.

Return to Interzone rule management functions.

Adding an interzone rule

From the navigation tree of the firewall management component, select **Interzone rules** under **Security Policy Management**. Click **Add** to enter the **Adding an interzone rule** page and configure the rule as shown in Figure 77 and Table 85.

Figure 77 Add an interzone rule


Adding an interzone rule

Src Zone: Local

Dest Zone: Local

Description: (1-31 Chars.)

Src IP: test, test1, test3, group

Dest IP: test, test1, test3, group

Service: bgp, chargen, cmd, daytime, dhcp-relay

Policy: default, corporate, as

Tip: Available items are in the list on the left, and the chosen ones are in the list on the right. For the "Src IP", "Dest IP" and "Service", choosing none means "Any".

Action: Permit Select the action for the firewall device to use for the server.

Time Range:

□ Enable logging

□ Enable this rule

□ Continue to add another rule

Table 85 Interzone rule configuration items

Item	Description
Src Zone	Required Select a source zone for the interzone rule.
Dest Zone	Required Select a destination zone for the interzone rule.
Description	Optional Type some descriptive information for the interzone rule. Valid characters for the description: letters, digits, blank spaces, colons (:), underscores (_), commas (,), periods (.), exclamatory marks (!), and hyphens (-), where underscores can’t appear at the beginning or end of the name.

Src IP	Required Add source IP addresses for the interzone rule. • Available IP addresses are listed in the left box. The right box lists the source IP addresses to be added to the interzone rule. • You can select one or more items in the left box and then click **Add>>** to add them to the right box. You can also select one or more items in the right box and click **<<Remove** to remove them from the right box to the left box. • If you do not add any IP address to the right box, the interzone applies to any source IP address.
Dest IP	Required Add destination IP addresses for the interzone rule. • Available IP addresses are listed in the left box. The right box lists the destination IP addresses to be added to the interzone rule. • You can select one or more items in the left box and then click **Add>>** to add them to the right box. You can also select one or more items in the right box and click **<<Remove** to remove them from the right box to the left box. • If you do not add any IP address to the right box, the interzone applies to any destination IP address.
Service	Required Add services for the interzone rule. • Available services are listed in the left box. The right box lists the services to be added to the interzone rule. • You can select one or more items in the left box and then click **Add>>** to add them to the right box. You can also select one or more items in the right box and click **<<Remove** to remove them from the right box to the left box. • If you do not add any service to the right box, the interzone applies to any service.
Policy	Required Add policies to which you want to add the interzone rule. You can add a rule to multiple policies when you create the rule, or add it to a policy on the policy's rule management page. • Available policies are listed in the left box. The right box lists the policies to be added for the interzone rule. • You can select one or more items in the left box and then click **Add>>** to add them to the right box. You can select one or more items in the right box and click **<<Remove** to remove them from the right box to the left box.
Action	Required Select a filtering action for the interzone rule. It can be **Permit** or **Deny**.
Time Range	Optional Specify the effective time for the interzone rule. You can select a time range for the rule. If you do not select a time range, the rule takes effect at any time.
Enable logging	Optional Select this option to enable the syslog function for the interzone rule. By default, this option is not selected.

Enable this rule	Optional Select this option to enable the interzone rule. By default, this option is not selected.
Continue to add another rule	Optional Select this option to add another rule after finishing this rule. By default, this option is not selected.

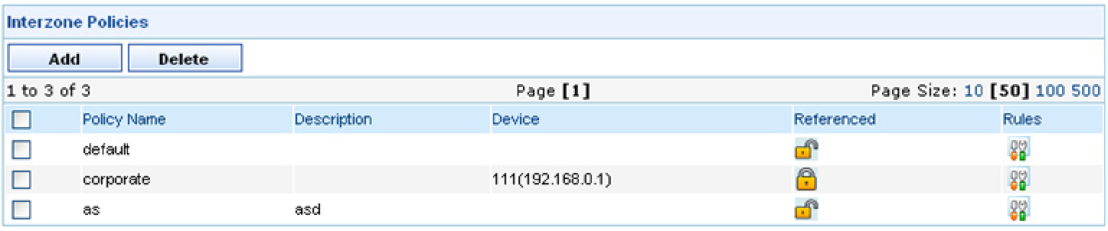
Return to Interzone rule management functions.

Interzone policies

Configuration guide

From the navigation tree of the firewall management component, select **Interzone Policies** under **Security Policy Management** to enter the interzone policy management page, as shown in Figure 78. Table 86 describes the functions available on the page.

Figure 78 Interzone policy management page



Interzone Policies

Add Delete

1 to 3 of 3 Page [1] Page Size: 10 [50] 100 500

□	Policy Name	Description	Device	Referenced	Rules
□	default			🔓	
□	corporate		111(192.168.0.1)	🔒	
□	as	asd		🔓	

Table 86 Interzone policy management functions

Function	Description
Interzone policy list	Allows you to view all interzone policies in the system.
Adding an interzone policy	Allows you to add an interzone policy.
Deleting interzone policies	Allows you to delete interzone policies. Follow these steps: 1. Select the check boxes before the interzone policies to be deleted. 2. Click **Delete**. IMPORTANT: • Interzone policies that have been applied cannot be deleted. • Interzone polices named **default** and **corporate** are system predefined policies and cannot be deleted.

Interzone policy list

From the navigation tree of the firewall management component, select **Interzone Policies** under **Security Policy Management**. The interzone policy list is at the lower part of the page, as shown in Figure 78. Table 87 describes the fields of the list.

Table 87 Fields of the interzone policy list

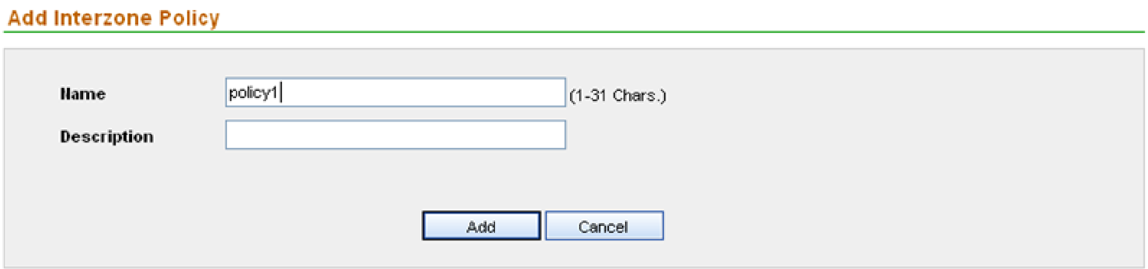
Filed	Description
Policy Name	Name of the interzone policy
Description	Descriptive information about the interzone policy
Device	Name of the device to which the interzone policy is deployed
Referenced	Whether the interzone policy is referenced or not
Rules	Click the icon to enter the page for managing the policy's rules (see "Rule management").

Return to Interzone policy management functions.

Adding an interzone policy

From the navigation tree of the firewall management component, select **Interzone policies** under **Security Policy Management**. Click **Add** to enter the **Adding Interzone Policy** page and configure the policy as shown in Figure 79 and Table 88.

Figure 79 Add an interzone policy



Add Interzone Policy

Name: policy1 (1-31 Chars.)

Description:

Table 88 Interzone policy configuration items

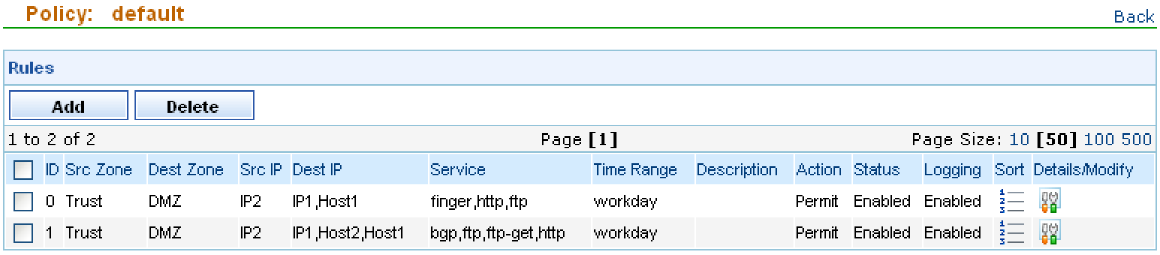
Item	Description
Name	Required Type a name for the interzone policy. The name cannot contain any of these characters: ^'<>&:;"/\
Description	Optional Type some descriptive information for the interzone policy.

Return to Interzone policy management functions.

Rule management

From the navigation tree of the firewall management component, select **Interzone policies** under **Security Policy Management**. Click the icon of a policy to enter the policy's rule management page. Figure 80 shows the rule management page of the policy **default**. Table 89 describes the fields of the rule list.

Figure 80 Rule management page



Policy: default

Back

Rules

Add Delete

1 to 2 of 2 Page [1] Page Size: 10 [50] 100 500

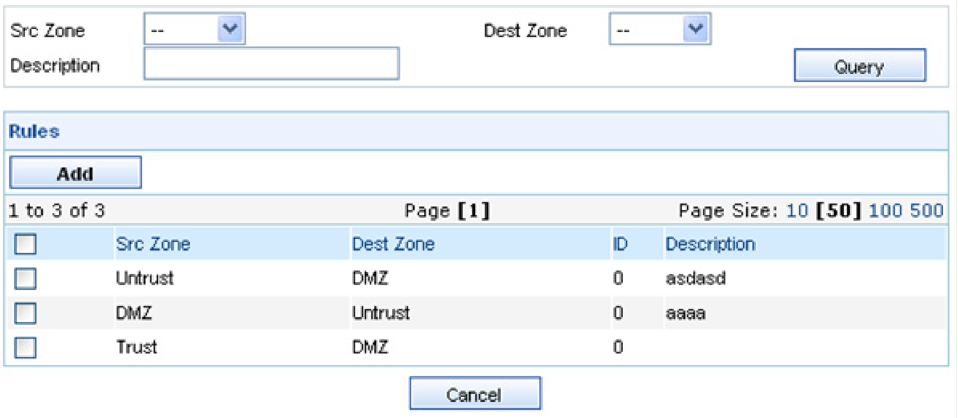
□	ID	Src Zone	Dest Zone	Src IP	Dest IP	Service	Time Range	Description	Action	Status	Logging	Sort	Details/Modify
□	0	Trust	DMZ	IP2	IP1,Host1	finger,http,ftp	workday		Permit	Enabled	Enabled	☰	⚙
□	1	Trust	DMZ	IP2	IP1,Host2,Host1	bgp,ftp,ftp-get,http	workday		Permit	Enabled	Enabled	☰	⚙

Table 89 Fields of the policy's rule list

Filed	Description
ID	ID of the interzone rule When you create an interzone rule, the system automatically assigns an ID to the rule according to the number of existing rules for the source zone and destination zone pair, starting from 0. For example, the first rule created for the source zone Trust and the destination zone DMZ is numbered 0, the second rule created for the same source zone and destination zone pair is numbered 1.
Src Zone	Source zone of the interzone rule
Dest Zone	Destination zone of the interzone rule
Src IP	Source IP address of the interzone rule
Dest IP	Destination IP address of the interzone rule
Service	All services of the interzone rule
Time Range	Time range during which the interzone rule takes effect
Description	Descriptive information about the interzone rule
Action	Filtering action of the interzone rule
Status	Whether the interzone rule is enabled or disabled
Logging	Whether logging is enabled for the interzone rule
Sort	Click the ☰ icon to change the position of the interzone rule among the rules for the same source zone and destination zone. See "Sorting interzone rules."
Details/Modify	Click the ⚙ icon to enter the interzone rule list and modify the interzone rule.

To add more interzone rules to the policy, click **Add** on the policy's rule management page. A page as shown in Figure 81 appears, showing all rules that have been created for the same source zone and destination zone pair but are not in the policy. Select the rules you want to add to the policy and click **Add**.

Figure 81 Add interzone rules to the policy


Src Zone -- Dest Zone --

Description

1 to 3 of 3 Page [1] Page Size: 10 [50] 100 500

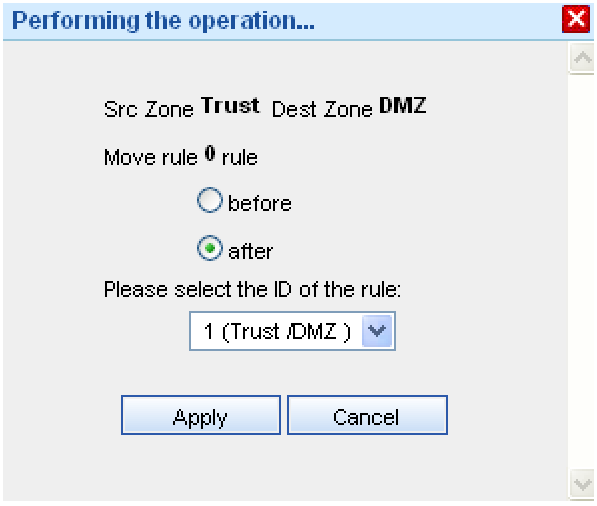
□	Src Zone	Dest Zone	ID	Description
□	Untrust	DMZ	0	asdasd
□	DMZ	Untrust	0	aaaa
□	Trust	DMZ	0	

Return to Interzone policy management functions.

Sorting interzone rules

On an interzone policy's rule management page, you can click the ☰ icon of a rule to change the position of the rule among the policy's rules for the same source zone and destination zone. For example, on the page shown in Figure 80, you can click the ☰ icon of rule 0 to bring up the page shown in Figure 82, select **after**, select rule **1** from the drop-down list, and click **Apply** to move rule 0. Figure 83 shows the result.

Figure 82 Move rules 0



Src Zone **Trust** Dest Zone **DMZ**

Move rule **0** rule

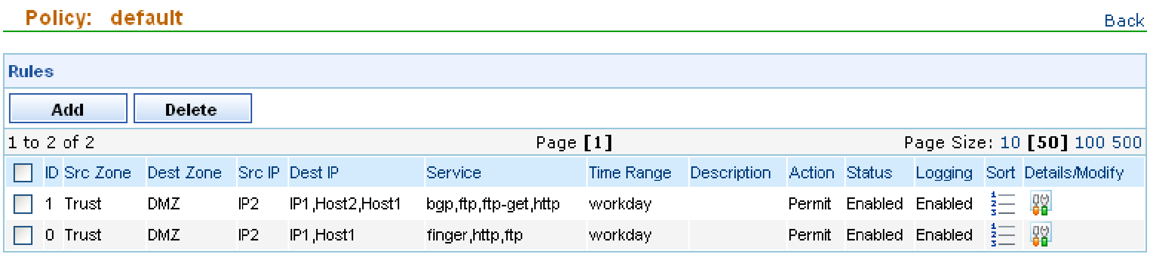
○ before

● after

Please select the ID of the rule:

1 (Trust /DMZ)

Figure 83 Policy's rule list after sorting the order


Policy: default

1 to 2 of 2 Page [1] Page Size: 10 [50] 100 500

□	ID	Src Zone	Dest Zone	Src IP	Dest IP	Service	Time Range	Description	Action	Status	Logging	Sort	Details/Modify
□	1	Trust	DMZ	IP2	IP1,Host2,Host1	bgp,ftp,ftp-get,http	workday		Permit	Enabled	Enabled	☰	✎
□	0	Trust	DMZ	IP2	IP1,Host1	finger,http,ftp	workday		Permit	Enabled	Enabled	☰	✎

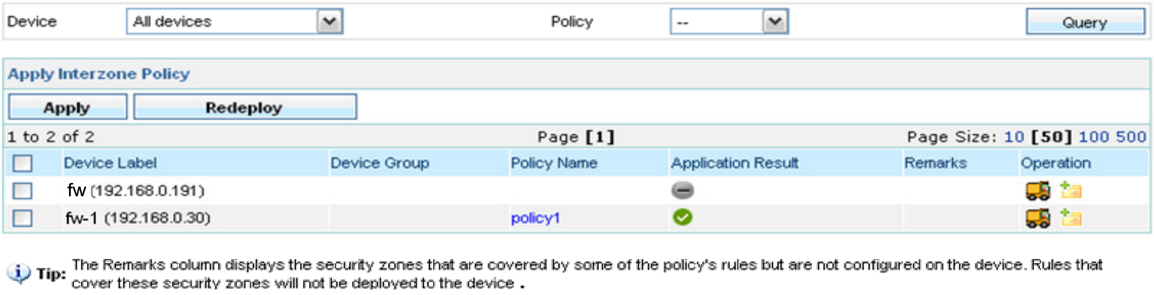
Return to Fields of the policy's rule list.

Interzone policy applications

Configuration guide

From the navigation tree of the firewall management component, select **Apply Interzone Policy** under **Security Policy Management** to enter the interzone policy application management page, as shown in Figure 84. Table 90 shows the functions available on the page.

Figure 84 Interzone policy application management



Device: All devices | Policy: -- | Query

Apply Interzone Policy

Apply | Redeploy

1 to 2 of 2 | Page [1] | Page Size: 10 [50] 100 500

□	Device Label	Device Group	Policy Name	Application Result	Remarks	Operation
□	fw (192.168.0.191)			⊖		
□	fw-1 (192.168.0.30)		policy1	✓		

Tip: The Remarks column displays the security zones that are covered by some of the policy's rules but are not configured on the device. Rules that cover these security zones will not be deployed to the device .

Table 90 Interzone policy application management functions

Function	Description
Interzone policy application list	Allows you to view all interzone policy applications in the system.
Applying interzone policies	Allows you to apply an interzone policy to devices.
Applied rules list	Allows you to manage the interzone rules deployed on the specified device.
Redeploying a policy	Allows you to redeploy an interzone policy to devices.

Interzone policy application list

From the navigation tree of the firewall management component, select **Apply Interzone Policy** under **Security Policy Management**. The interzone policy application list is at the lower part of the page. See Figure 84. Table 91 describes the policy application query options and Table 92 describes the fields of the policy application list.

Table 91 Interzone policy application query options

Option	Description
Device	Query interzone policy applications by device.
Policy	Query interzone policy applications by policy.

Table 92 Fields of the interzone policy application list

Field	Description
Device Label	Name and IP address of the device to which the interzone policy is applied
Device Group	Device group that the device is in
Policy Name	Name of the policy applied to the device You can click the policy name link to manage the policy's rules (see "Rule management").

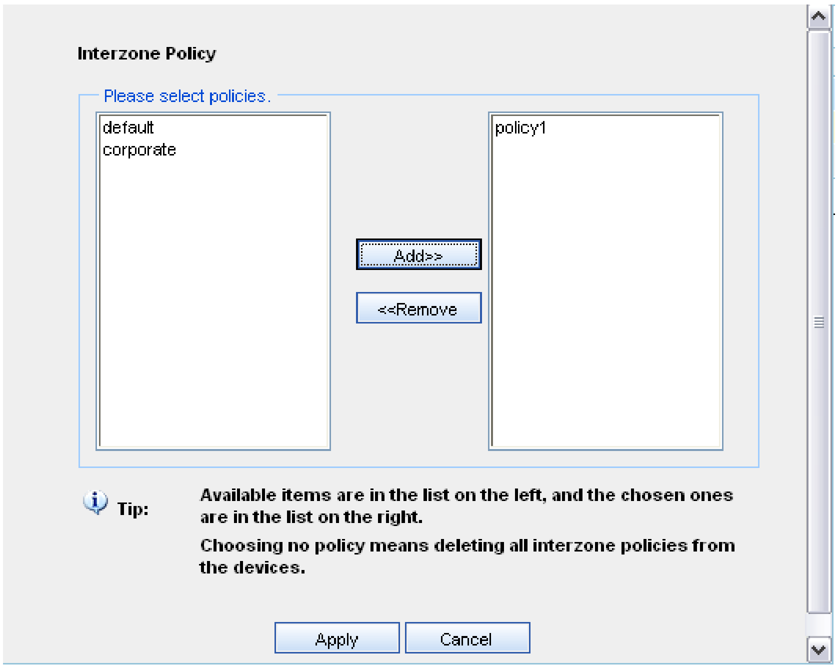
Application Result	Application result of the interzone policy
Remarks	Displays the security zones that are covered by some of the policy's rules but not configured on the device. Rules that cover these security zones will not be deployed to the device.
Operation	• Click the icon to apply policies to the device (see "Applying interzone policies") • Click the icon to view the rules applied to the device (see "Applied rules list").

Return to Interzone policy application management functions.

Applying interzone policies

From the navigation tree of the firewall management component, select **Apply Interzone Policy** under **Security Policy Management**. Select a device and click **Apply**. The interzone policy application page appears, as shown in Figure 85. Select the policies to be applied from the left box, click **Add>>** to add the policies to the right box, and click **Apply**.

Figure 85 Apply policies to the device



Interzone Policy

Please select policies.

default
corporate

policy1

Tip: Available items are in the list on the left, and the chosen ones are in the list on the right.
Choosing no policy means deleting all interzone policies from the devices.

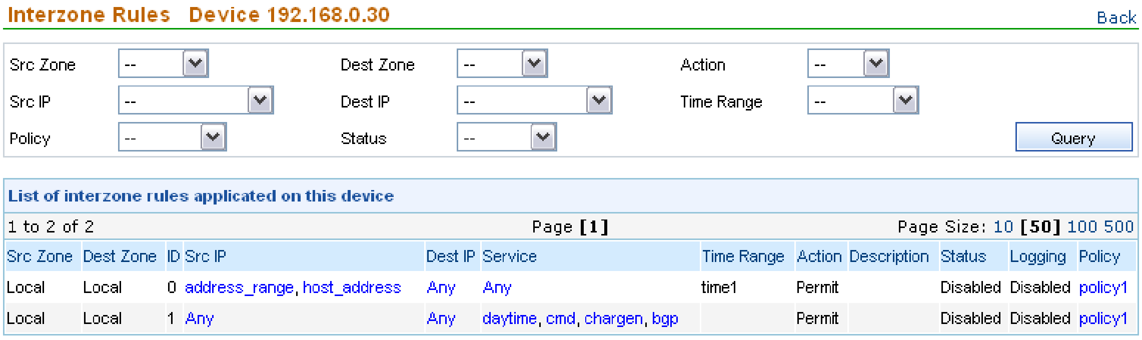
△ CAUTION:

The left box lists the available policies. The right box lists the policies to be applied to the device. Leaving the right box blank means to delete all interzone policies on the device.

Applied rules list

From the navigation tree of the firewall management component, select **Apply Interzone Policy** under **Security Policy Management**. Click the icon of a device to view the rules applied to the device. Figure 86 shows the rules applied to device 192.168.0.30. Table 93 describes the query options and Table 94 describes the fields of the rule list.

Figure 86 List of rules applied to a device



Interzone Rules   Device 192.168.0.30   Back

Src Zone	--	Dest Zone	--	Action	--
Src IP	--	Dest IP	--	Time Range	--
Policy	--	Status	--		Query

List of interzone rules applicated on this device

1 to 2 of 2   Page [1]   Page Size: 10 [50] 100 500

Src Zone	Dest Zone	ID	Src IP	Dest IP	Service	Time Range	Action	Description	Status	Logging	Policy
Local	Local	0	address_range, host_address	Any	Any	time1	Permit		Disabled	Disabled	policy1
Local	Local	1	Any	Any	daytime, cmd, chargen, bgp		Permit		Disabled	Disabled	policy1

Table 93 Applied rule list query options

Option	Description
Src Zone	Query interzone rules by source zone.
Dest Zone	Query interzone rules by destination zone.
Action	Query interzone rules by filtering action.
Src IP	Query interzone rules by source IP.
Dest IP	Query interzone rules by destination IP.
Time Range	Query interzone rules by time range.
Policy	Query interzone rules by policy.
Status	Query interzone rules by status (enabled or disabled)

Table 94 Fields of the interzone rule list

Filed	Description
Src Zone	Source zone of the interzone rule
Dest Zone	Destination zone of the interzone rule
ID	ID of the interzone rule When you create an interzone rule, the system automatically assigns an ID to the rule according to the number of existing rules for the source zone and destination zone pair, starting from 0. For example, the first rule created for the source zone Trust and the destination zone DMZ is numbered 0, the second rule created for the same source zone and destination zone pair is numbered 1.
Src IP	Source IP address of the interzone rule
Dest IP	Destination IP address of the interzone rule
Service	All services of the interzone rule
Time Range	Time range during which the interzone rule takes effect
Action	Filtering action of the interzone rule
Description	Descriptive information about the interzone rule
Status	Whether the interzone rule is enabled or disabled
Logging	Whether logging is enabled for the interzone rule

Policy	Policies that the interzone rule is in. You can click a policy name to enter the page for managing the policy's rules. See "Rule management."

Return to Interzone policy application management functions.

Firewall device management

Managing firewall devices

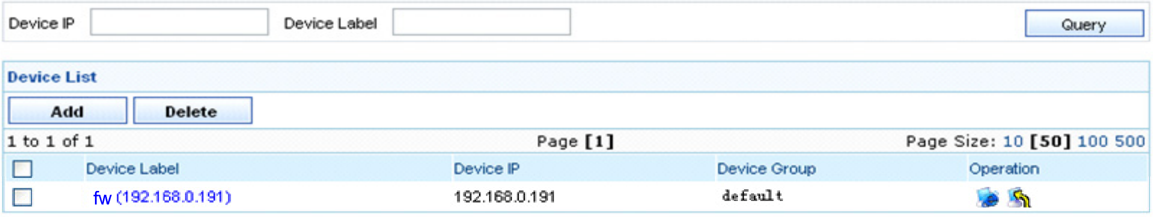
With the management right on devices, you can add or delete devices, view the detailed information of the devices, and change the device groups and labels of the devices.

If the system cannot discover some firewall devices automatically, you need to add these firewall devices to the firewall management component manually so that the Firewall Manager can collect and display the attack event statistics and event auditing information of these devices.

Configuration guide

From the navigation tree of the firewall management component, select **Device Management** under **Device Management** to enter the device management page, where the managed firewall devices are listed, as shown in Figure 87.

Figure 87 Firewall device management page



□	Device Label	Device IP	Device Group	Operation
□	fw (192.168.0.191)	192.168.0.191	default	

On the firewall device management page, you can view information about a firewall, or add or delete a firewall. Table 95 describes the functions in detail.

Table 95 Firewall management functions

Function	Description
Firewall device list	Allows you to view information about the current firewall devices.
Adding firewall devices	Allows you to add the firewall devices managed in the system management component to the firewall management component.
Deleting devices	Allows you to delete firewall devices. Follow these steps: 1. Select the check box before the firewall devices that you want to delete in the firewall device list. 2. Click **Delete**.

Firewall device list

From the navigation tree of the firewall management component, select **Device Management** under **Device Management**. The firewall device list is at the lower part of the page. See Figure 87. Table 97 describes the fields of the list.

Table 96 Query options on the firewall device management page

Option	Description
Device IP	Query a firewall device by its IP address.
Device Label	Query a firewall device by its label. ⓘ IMPORTANT: The label you input here must not include the parentheses and IP address. For example, if the device label is **wxsh (10.154.78.120)**, input only **wxsh**.

Table 97 Fields of the firewall device list

Field	Description
Device Label	Device name and IP address. You can click the link to view the detailed information of the device and modify the device settings. For more information, see "Device information."
Device IP	IP address of the device
Device Group	Device group where the device resides
Operation	• Click the icon of a device to log in to open the web console of the device. • Click the icon of a device to telnet to the device.

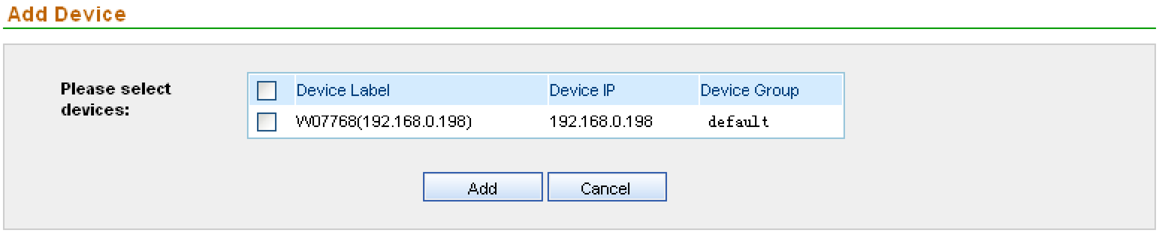
Return to Firewall management functions.

Adding firewall devices

This function is used to add firewall devices to the firewall management component. You can add only firewall devices that are under your management.

From the navigation tree of the firewall management component, select **Device Management** under **Device Management** to enter the device management page. Then, click **Add** to enter the page for adding firewall devices, as shown in Figure 88.

Figure 88 Add firewall devices



Add Device

Please select devices:

□ Device Label	Device IP	Device Group
□ W07768(192.168.0.198)	192.168.0.198	default

Select the check boxes before the devices that you want to add to the firewall management component, and then click **Add**. The firewall device management page appears, indicating that the devices are successfully added.

Return to Firewall management functions.

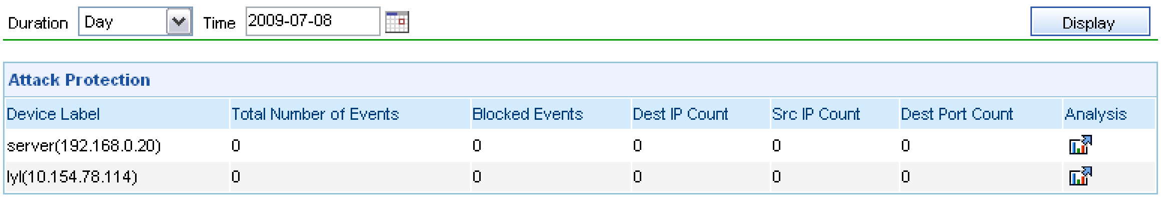
Viewing device statistics

The device statistics function can collect statistics on devices by day, week, and month. You can select the statistics period as needed and view the statistics report, which provides statistics on each firewall device, including the total number of events, number of blocked events, destination IP address count, source IP address count, and destination port count.

Configuration guide

From the navigation tree of the firewall management component, select **Device Statistics** under **Device Management** to enter the device statistics page, as shown in Figure 89.

Figure 89 Device statistics



Duration: Day Time: 2009-07-08

Attack Protection

Device Label	Total Number of Events	Blocked Events	Dest IP Count	Src IP Count	Dest Port Count	Analysis
server(192.168.0.20)	0	0	0	0	0	📊
lyl(10.154.78.114)	0	0	0	0	0	📊

Table 98 Device statistics query options

Option	Description
Duration	Select the statistics duration. You can select **Day**, **Week**, or **Month**, or select **Customize** to specify a statistics duration.
Time	Select the statistics time, whose value range varies with the statistics duration selected.

You can click the 📊 icon in the **Analysis** column of a device to enter the attack event analysis page. This page provides the detailed attack statistics data where you can view the detailed attack statistics in different ways. See "Event overview" for details.

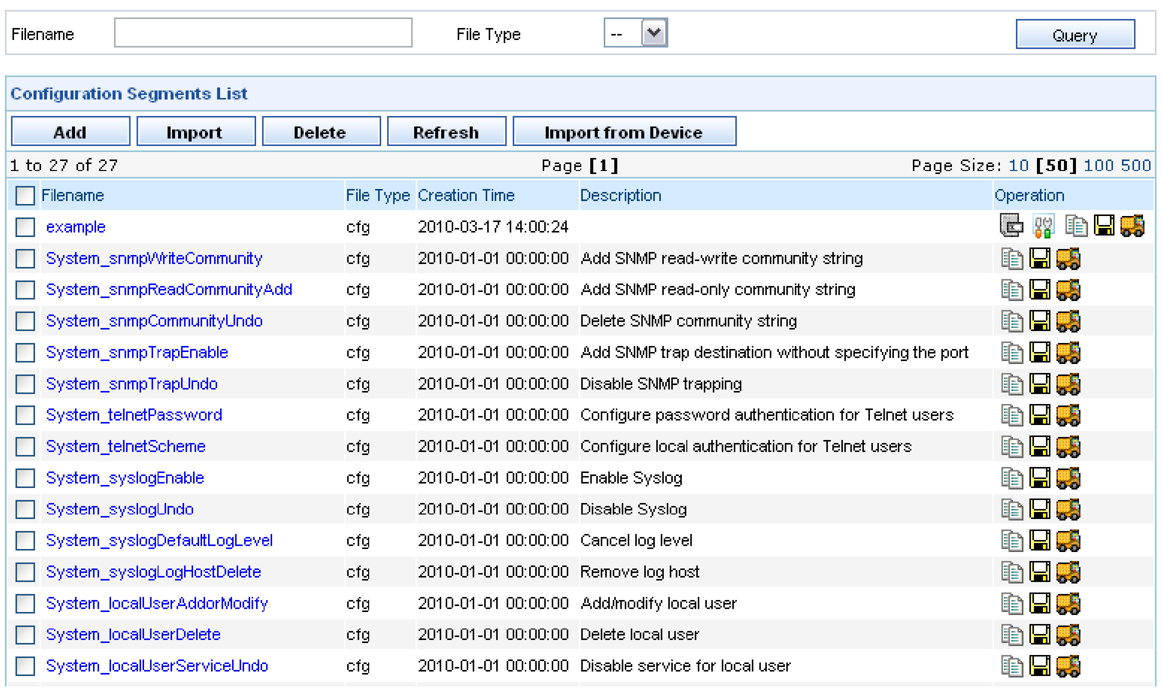
Managing the device configuration database

The system provides a centralized configuration segment management interface, where there are a set of pre-defined configuration segments. You can customize your own configuration segments based on these pre-defined segments, and modify, copy, delete, export, or deploy the custom configuration segments. You can also import configuration files from devices and modify them to quickly create new configuration segments that satisfy your requirements.

Configuration guide

From the navigation tree of the firewall management component, select **Device Configuration Database** under **Policy Management** to enter the device configuration segment management page, as shown in Figure 90. On this page, you can query configuration segments by filename and file type, add, modify, or delete configuration segments, import configuration segment from a local file, or import a configuration file from a device.

Figure 90 Device configuration segment management page



Filename | File Type -- | Query

Configuration Segments List

1 to 27 of 27 Page [1] Page Size: 10 [50] 100 500

□ Filename	File Type	Creation Time	Description	Operation
□ example	cfg	2010-03-17 14:00:24		
□ System_snmpWriteCommunity	cfg	2010-01-01 00:00:00	Add SNMP read-write community string	
□ System_snmpReadCommunityAdd	cfg	2010-01-01 00:00:00	Add SNMP read-only community string	
□ System_snmpCommunityUndo	cfg	2010-01-01 00:00:00	Delete SNMP community string	
□ System_snmpTrapEnable	cfg	2010-01-01 00:00:00	Add SNMP trap destination without specifying the port	
□ System_snmpTrapUndo	cfg	2010-01-01 00:00:00	Disable SNMP trapping	
□ System_telnetPassword	cfg	2010-01-01 00:00:00	Configure password authentication for Telnet users	
□ System_telnetScheme	cfg	2010-01-01 00:00:00	Configure local authentication for Telnet users	
□ System_syslogEnable	cfg	2010-01-01 00:00:00	Enable Syslog	
□ System_syslogUndo	cfg	2010-01-01 00:00:00	Disable Syslog	
□ System_syslogDefaultLogLevel	cfg	2010-01-01 00:00:00	Cancel log level	
□ System_syslogLogHostDelete	cfg	2010-01-01 00:00:00	Remove log host	
□ System_localUserAddorModify	cfg	2010-01-01 00:00:00	Add/modify local user	
□ System_localUserDelete	cfg	2010-01-01 00:00:00	Delete local user	
□ System_localUserServiceUndo	cfg	2010-01-01 00:00:00	Disable service for local user	

Table 99 Configuration segment management functions

Function	Description
Configuration segment list	Allows you to view information about all configuration segments.
Adding a configuration segment	Allows you to add a configuration segment.
Importing a configuration segment	Allows you to import a configuration segment from a locally saved file. On the configuration segment management page, click the **Import** button.
Deleting configuration segments	Allows you to selected configuration segments. On the configuration segment management page, select the configuration segments that you want to delete and click the **Delete** button.
Refreshing configuration segments	Allows you to refresh the configuration segments list. On the configuration segment management page, click the **Refresh** button.
Importing configuration segments from device	Allows you to import the running configuration file from a device.

Configuration segment list

The configuration segment list is on the configuration segment management page, as shown in Figure 90.

Table 100 Fields of the configuration segments list.

Field	Description
Filename	Name of the configuration segment file
File Type	Type of the configuration segment file
Creation Time	Creation date and time of the configuration segment

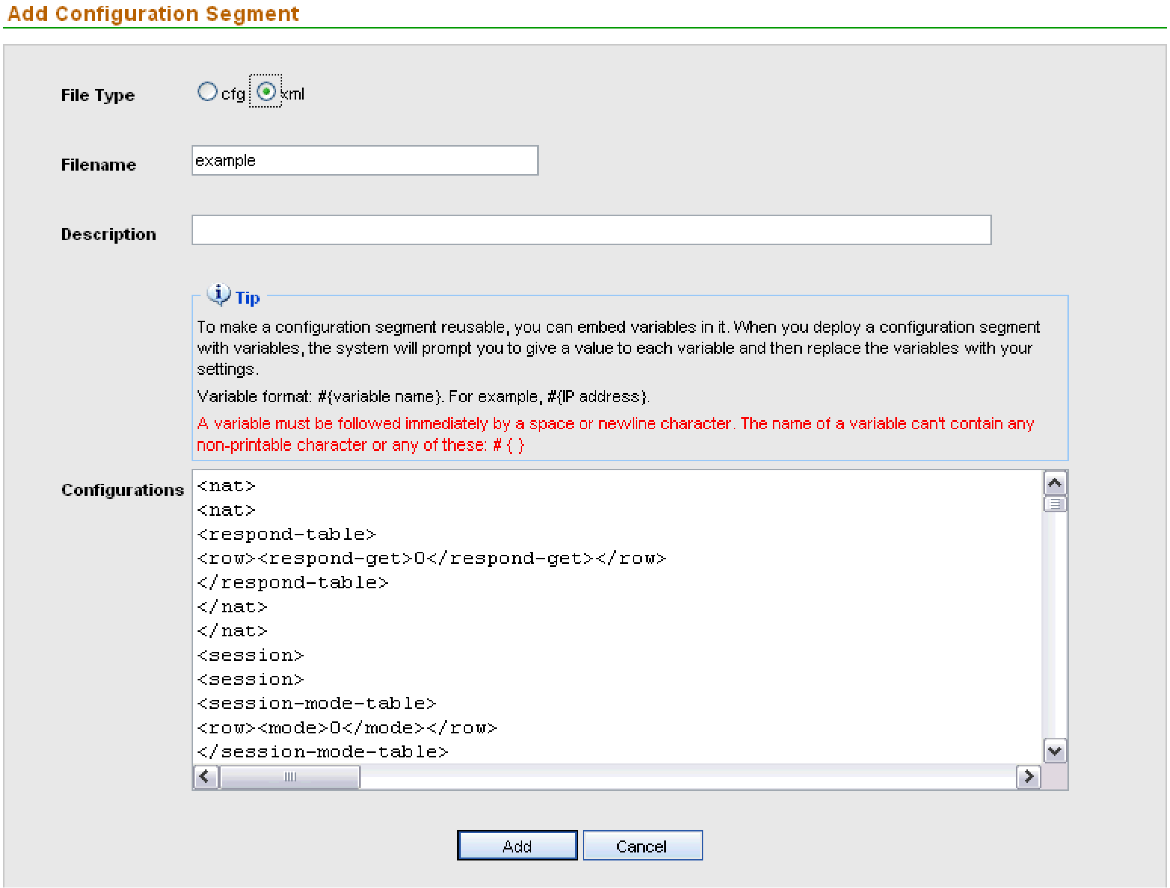
Description	Detailed description of the configuration segment
Operation	• Click the icon of a configuration segment to rename the configuration segment file. • Click the icon of a configuration segment to modify the description and configurations of the segment. • Click the icon of a configuration segment to copy the segment. • Click the icon of a configuration segment to export the segment. • Click the icon of a configuration segment to configure a deployment task for the segment (see "Deploying a configuration segment").

Return to Configuration segment management functions.

Adding a configuration segment

To add a configuration segment, click **Add** on the configuration segment management page to enter the **Add Configuration Segment** page, as shown in Figure 91. Then, select the file type, specify a filename, type a description, and add and edit configuration commands that comply with the configuration file syntax requirements. Finally, click **Add** to create the configuration segment.

Figure 91 Add a configuration segment



Add Configuration Segment

File Type ○ cfg ● xml

Filename: example

Description:

Tip

To make a configuration segment reusable, you can embed variables in it. When you deploy a configuration segment with variables, the system will prompt you to give a value to each variable and then replace the variables with your settings.

Variable format: #{variable name}. For example, #{IP address}.

A variable must be followed immediately by a space or newline character. The name of a variable can't contain any non-printable character or any of these: # { }

Configurations:

```
<nat>
<nat>
<respond-table>
<row><respond-get>0</respond-get></row>
</respond-table>
</nat>
</nat>
<session>
<session>
<session-mode-table>
<row><mode>0</mode></row>
</session-mode-table>
```

Table 101 Configuration segment configuration items

Item	Description
File Type	Required Select the configuration segment type, cfg or xml.
Filename	Required Type a filename for the configuration segment. A filename must be unique in the system. Leading spaces and ending spaces in the filename will be removed and the filename cannot contain any of these characters: '"<>&%:;/\
Description	Optional Type some descriptive information for the configuration segment.
Configurations	Required Type the contents of the configuration segment.

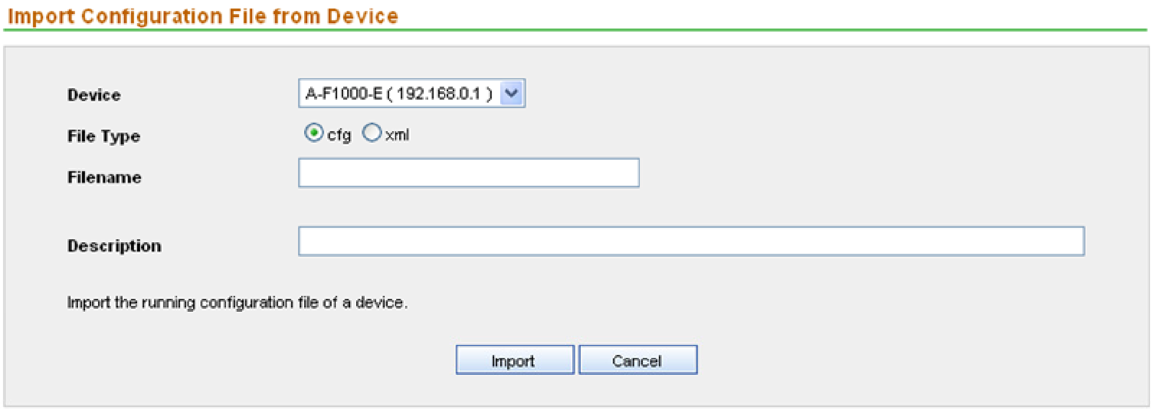
Return to Configuration segment management functions.

Importing configuration segments from device

On the configuration segment management page, click **Import from Device** to import the running configuration file of a device.

Select a device, select the file type, specify a filename and a description, and click **Import** to import the running configuration file of the device. After the import operation completes successfully, a configuration segment by the name you specified will appear in the configuration segments list. Later, you can modify the content of the segment as desired.

Figure 92 Import the running configuration file of a device



Import Configuration File from Device

Device: A-F1000-E (192.168.0.1)

File Type: ● cfg ○ xml

Filename:

Description:

Import the running configuration file of a device.

CAUTION:

- Available devices are those added in the device management module of the firewall management component.
- The imported configuration file will be saved with the specified filename in the system. You must specify the filename and the filename must not be used by any existing file. Leading spaces and ending spaces in the filename will be removed and the filename cannot contain any of these characters: '"<>&%:;/\

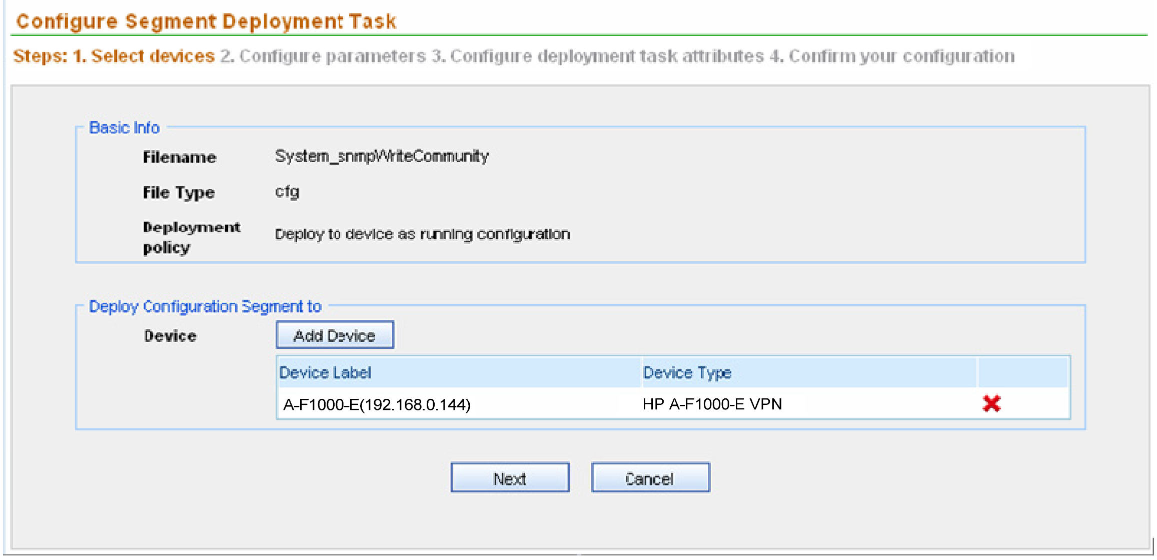
Return to Configuration segment management functions.

Deploying a configuration segment

On the configuration segments list, click the 🚚 icon of a configuration segment to configure a deployment task for the segment, as shown in Figure 93.

1. Select devices—Click **Add Device** and select the devices you want to deploy the configuration segment to, and then click **Next**.

Figure 93 Select the devices you want to deploy the configuration segment to



Configure Segment Deployment Task

Steps: 1. Select devices 2. Configure parameters 3. Configure deployment task attributes 4. Confirm your configuration

Basic Info

Filename: System_snmpWriteCommunity

File Type: cfg

Deployment policy: Deploy to device as running configuration

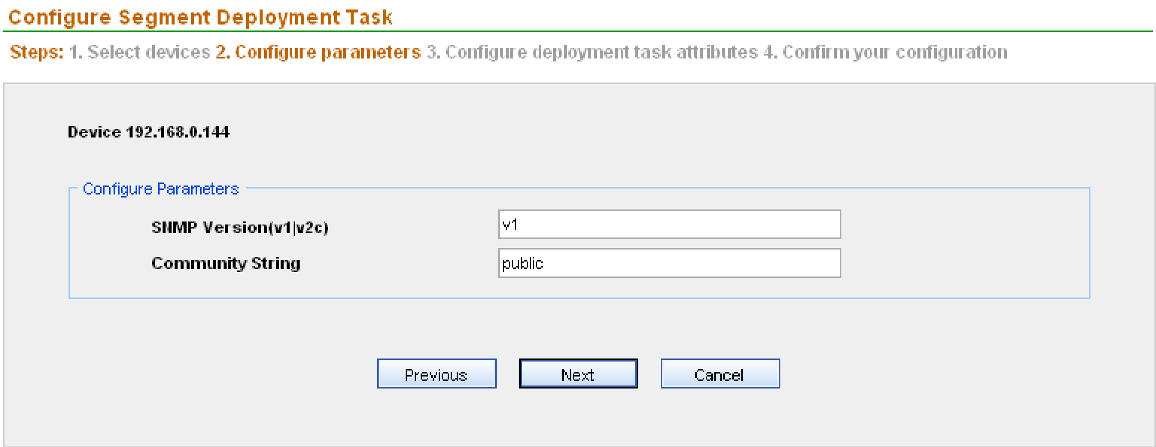
Deploy Configuration Segment to

Device: Add Device

Device Label	Device Type	
A-F1000-E(192.168.0.144)	HP A-F1000-E VPN	✖

2. Configure parameters—Type the SNMP version and community string and click **Next**.

Figure 94 Configure parameters



Configure Segment Deployment Task

Steps: 1. Select devices 2. Configure parameters 3. Configure deployment task attributes 4. Confirm your configuration

Device 192.168.0.144

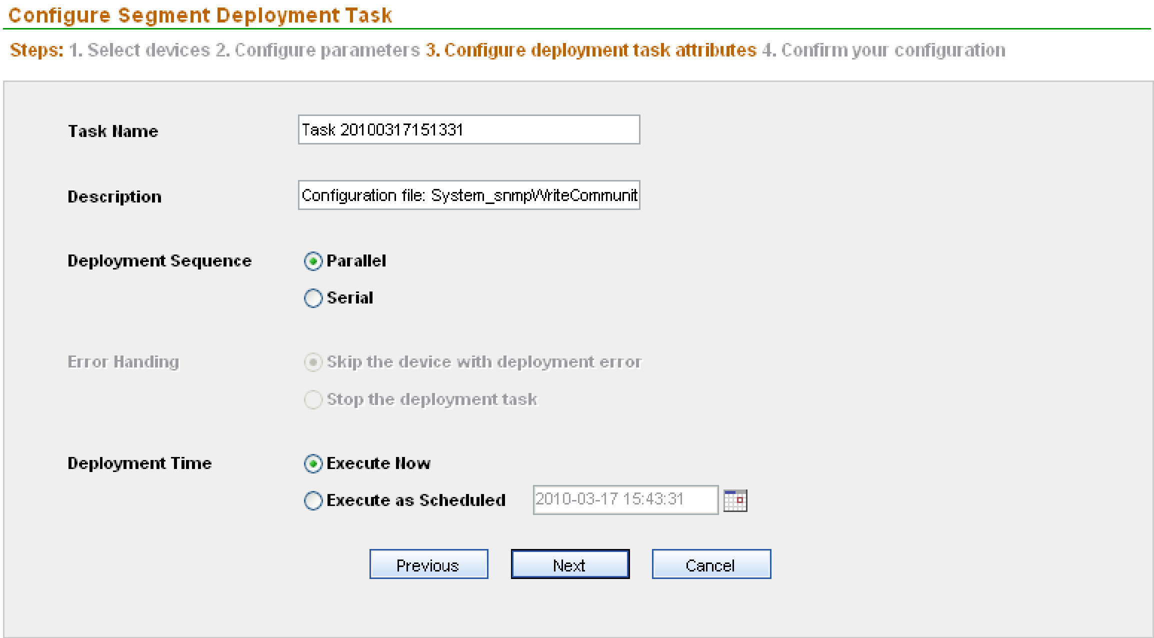
Configure Parameters

SNMP Version(v1|v2c): v1

Community String: public

3. Configure deployment task attributes as shown in Figure 95 and click **Next**.

Figure 95 Configure deployment task attributes



Configure Segment Deployment Task

Steps: 1. Select devices 2. Configure parameters 3. Configure deployment task attributes 4. Confirm your configuration

Task Name: Task 20100317151331

Description: Configuration file: System_snmpWriteCommunit

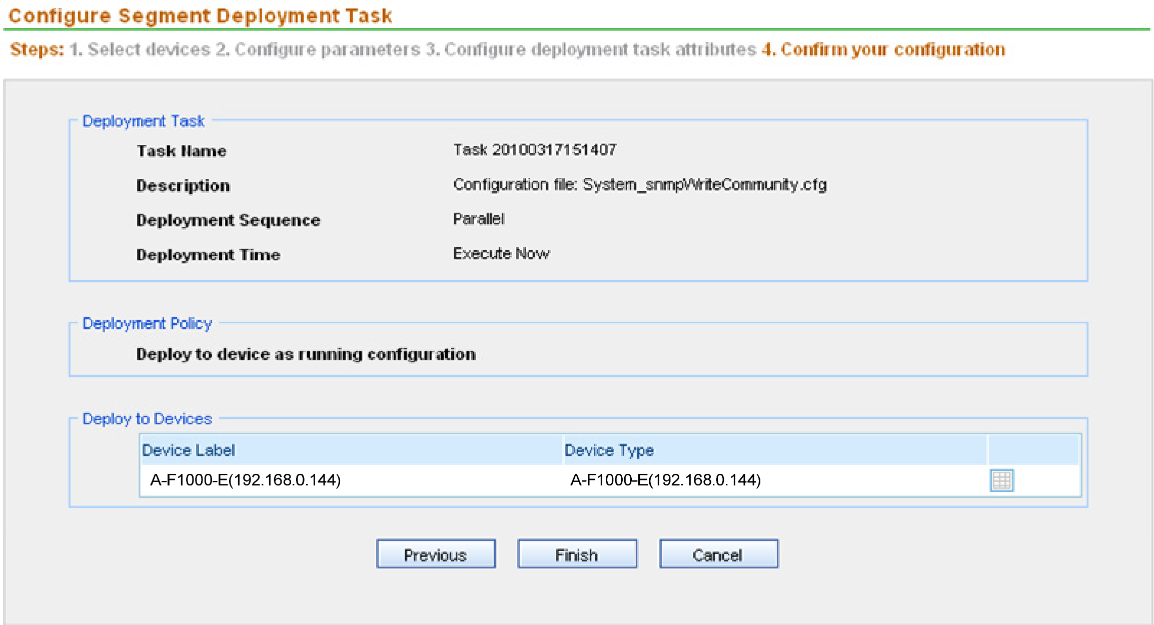
Deployment Sequence: ● Parallel ○ Serial

Error Handing: ● Skip the device with deployment error ○ Stop the deployment task

Deployment Time: ● Execute Now ○ Execute as Scheduled 2010-03-17 15:43:31

4. Confirm your configuration. You can click the ▦ icon in the device list to view the configuration content to be deployed. To modify your configuration, click **Previous**. Check that everything is OK and click **Finish**.

Figure 96 Confirm your configuration



Configure Segment Deployment Task

Steps: 1. Select devices 2. Configure parameters 3. Configure deployment task attributes 4. Confirm your configuration

Deployment Task

Task Name	Task 20100317151407
Description	Configuration file: System_snmpWriteCommunity.cfg
Deployment Sequence	Parallel
Deployment Time	Execute Now

Deployment Policy

Deploy to device as running configuration

Deploy to Devices

Device Label	Device Type	
A-F1000-E(192.168.0.144)	A-F1000-E(192.168.0.144)	▦

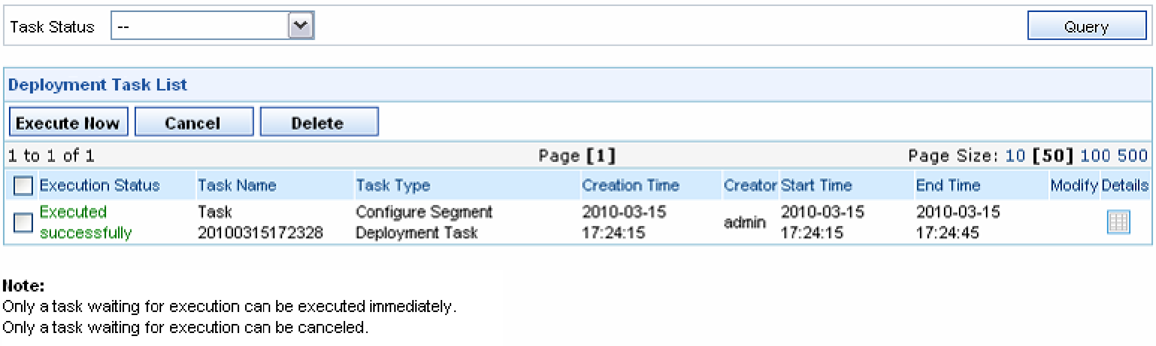
Return to Configuration segment management functions.

Managing deployment tasks

Configuration guide

From the navigation tree of the firewall management component, select **Deployment Tasks** under **Policy Management** to enter the deployment task management page, as shown in Figure 97. On this page, you can select a task status to display all deployment tasks in the status, select tasks to execute them immediately, or cancel, delete, or modify tasks.

Figure 97 Deployment task management page



□ Execution Status	Task Name	Task Type	Creation Time	Creator	Start Time	End Time	Modify	Details
□ Executed successfully	Task 20100315172328	Configure Segment Deployment Task	2010-03-15 17:24:15	admin	2010-03-15 17:24:15	2010-03-15 17:24:45		▦

Note:
Only a task waiting for execution can be executed immediately.
Only a task waiting for execution can be canceled.

Table 102 Deployment task management functions

Function	Description
Deployment task list	Allows you to view information about all deployment tasks.
Executing deployment tasks immediately	Allows you to execute selected deployment tasks. On the configuration segment management page, select the deployment tasks that you want to execute and click the **Execute Now** button. Only a task waiting for execution can be executed immediately.
Canceling deployment tasks	Allows you to cancel selected deployment tasks. On the configuration segment management page, select the deployment tasks that you want to cancel and click the **Cancel** button. Only a task waiting for execution can be canceled.
Deleting deployment tasks	Allows you to delete deployment tasks. Follow these steps: 1. Select the check boxes before the deployment tasks to be deleted. 2. Click **Delete**.

Deployment task list

From the navigation tree of the firewall management component, select **Deployment Tasks** under **Policy Management**. The deployment task list is at the lower part of the page. See Figure 97. Table 103 describes the fields of the list.

Table 103 Fields of the deployment task list

Field	Description
Execution Status	Execution status of the task
Task Name	Name of the task
Task Type	Type of the task
Creation Time	Creation date and time of the task
Creator	Administrator who created the task
Start Time	Time when the task started.
End Time	Time when the task ended.
Modify	The **Modify** icon brings you to the task modification page, where you can modify task attributes such as the description, deployment sequence, error handling mode, and deployment time.
Details	The **Details** icon brings you to the details page of a task.

SSL VPN auditing

As Virtual Private Network (VPN) is much cheaper and more flexible to use than leased lines, more and more companies are establishing VPNs over public networks such as the Internet, so as to allow employees working at home or traveling on business, employees of branch offices, and partners to access the internal networks. SSL VPN is an emerging VPN technology, and has been widely used for secure remote web-based access. For example, it can allow remote users to access the corporate network securely.

The SSL VPN auditing component supports analyzing and auditing operations of SSL VPN users. It also provides realtime monitoring of online users and history records, helping you understand SSL VPN usage and the network security.

To access the SSL VPN auditing component, select the **SSL VPN Auditing** tab. Then, you can perform:

- Comprehensive analysis
- SSL VPN log auditing

Comprehensive analysis

The comprehensive analysis function provides information of online users, online user trend, daily user statistics and device monitoring for you to understand what SSL VPN users have done during their access to the internal network. You can export and save the reports as an Excel file.

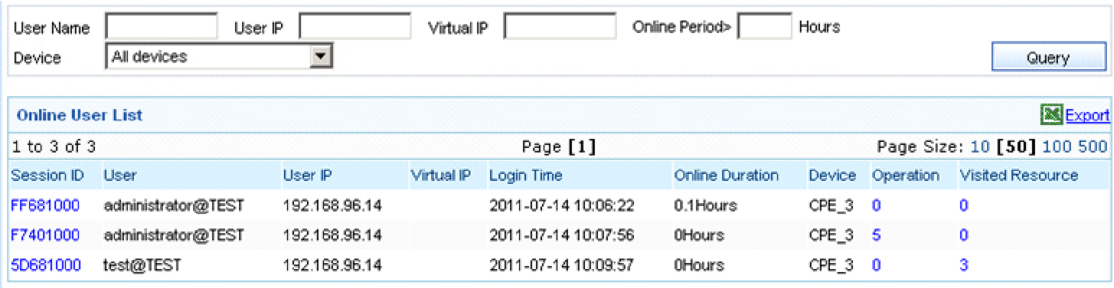
Online users

The online user statistics function displays the SSL VPN users that are currently accessing the internal network. This list presents the username, user IP address, virtual IP address, login time, online duration, operation that the user has performed, and resources the user has accessed. It also supports flexible online user query.

Configuration guide

From the navigation tree of the SSL VPN auditing component, select **Online Users** under **Comprehensive Analysis** to enter the online user list page, as shown in Figure 98.

Figure 98 Online user list



1 to 3 of 3 Page [1] Page Size: 10 [50] 100 500

Session ID	User	User IP	Virtual IP	Login Time	Online Duration	Device	Operation	Visited Resource
FF681000	administrator@TEST	192.168.96.14		2011-07-14 10:06:22	0.1Hours	CPE_3	0	0
F7401000	administrator@TEST	192.168.96.14		2011-07-14 10:07:56	0Hours	CPE_3	5	0
5D681000	test@TEST	192.168.96.14		2011-07-14 10:09:57	0Hours	CPE_3	0	3

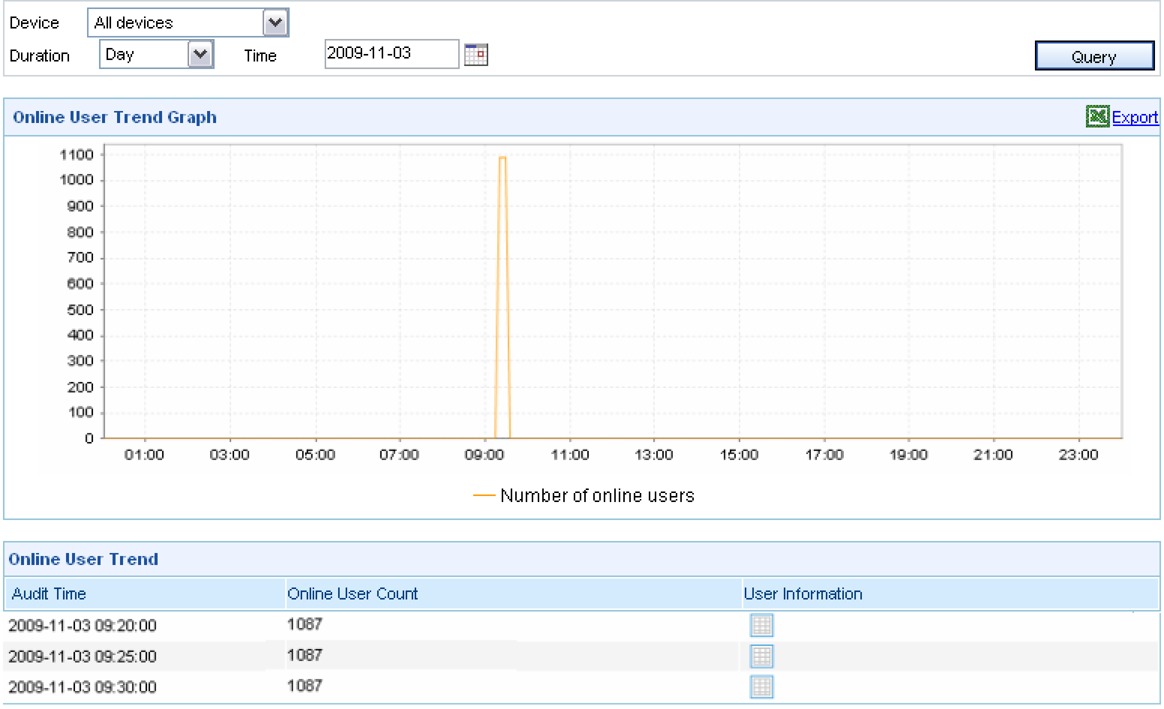
Online users trends

The online user trend graph displays the number of online SSL VPN users during a day, week, month, or a customized period of time.

Configuration guide

From the navigation tree of the SSL VPN auditing component, select **Online Users Trends** under **Comprehensive Analysis** to enter the online user trend analysis page, where the online user trend graph is listed, as shown in Figure 99. Under the trend graph is a list showing the online user statistics, including the audit time, online user count, and a link for you to view the user information.

Figure 99 Online user trend



Device: All devices

Duration: Day

Time: 2009-11-03

Online User Trend

Audit Time	Online User Count	User Information
2009-11-03 09:20:00	1087	▦
2009-11-03 09:25:00	1087	▦
2009-11-03 09:30:00	1087	▦

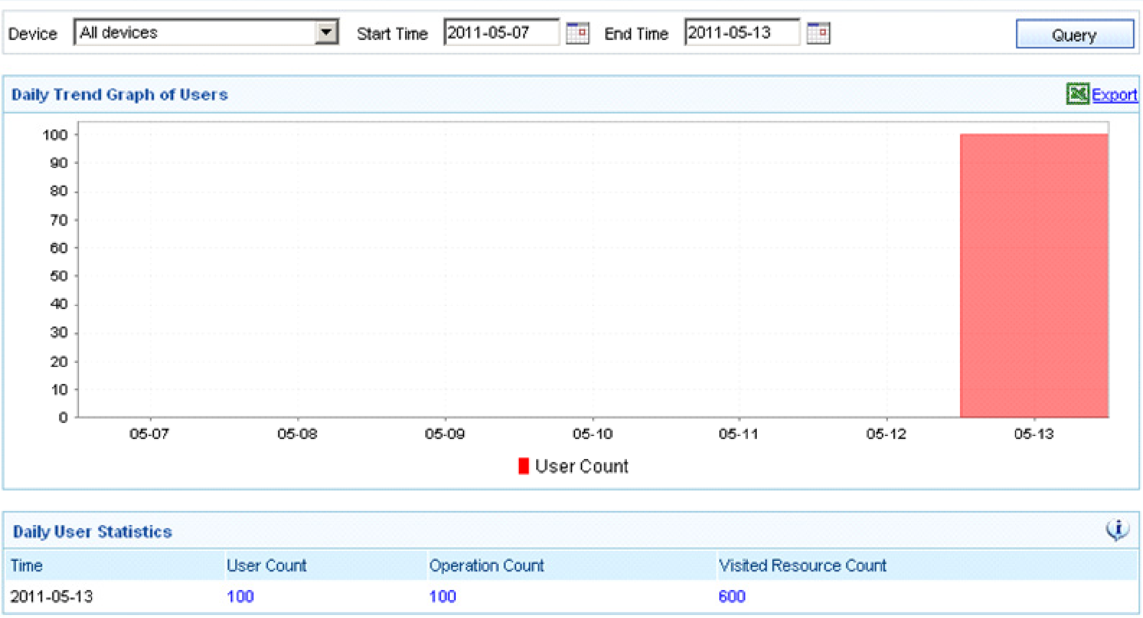
Daily user statistics

The daily user statistics function presents you the counts of login times of SSL VPN users, user operations, and resources that users have accessed every day during a period of time.

Configuration guide

From the navigation tree of the SSL VPN auditing component, select **Daily User Statistics** under **Comprehensive Analysis** to enter the daily user statistics page, as shown in Figure 100. Under the trend graph is a list showing the detailed daily user trend statistics, including the time, user login times, number of user operations, and number of resources that the users have accessed.

Figure 100 Daily user statistics



Device: All devices   Start Time: 2011-05-07   End Time: 2011-05-13   Query

Daily Trend Graph of Users   Export

Daily User Statistics

Time	User Count	Operation Count	Visited Resource Count
2011-05-13	100	100	600

NOTE:

The **User Count** field shows the count of login times on that day.

Device monitoring

In addition to the SSL VPN user statistics of the entire network, the SSL VPN auditing component also allows you to view SSL VPN access statistics by firewall device and log in to a device as an administrator or user.

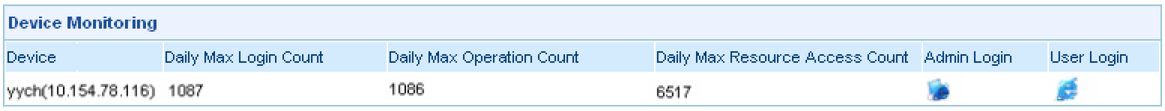
Configuration guide

From the navigation tree of the SSL VPN auditing component, select **Device Monitoring** under **Comprehensive Analysis** to enter the device monitoring page, as shown in Figure 101. The page presents the daily SSL VPN access information by device, including the IP address of the device, maximum daily user login times, maximum daily operations, and maximum daily resource access operations.

In addition, you can:

- Click the icon in the **Admin Login** column of a device to log in to the device as an administrator.
- Click the icon in the **User Login** column of a device to log in to the device as a user.

Figure 101 Device monitoring



Device Monitoring

Device	Daily Max Login Count	Daily Max Operation Count	Daily Max Resource Access Count	Admin Login	User Login
yych(10.154.78.116)	1087	1086	6517		

SSL VPN log auditing

The SSL VPN log auditing function allows you to audit user access records, operation logs, resource accesses, and authentication failures. You can also export and save the reports as an Excel file.

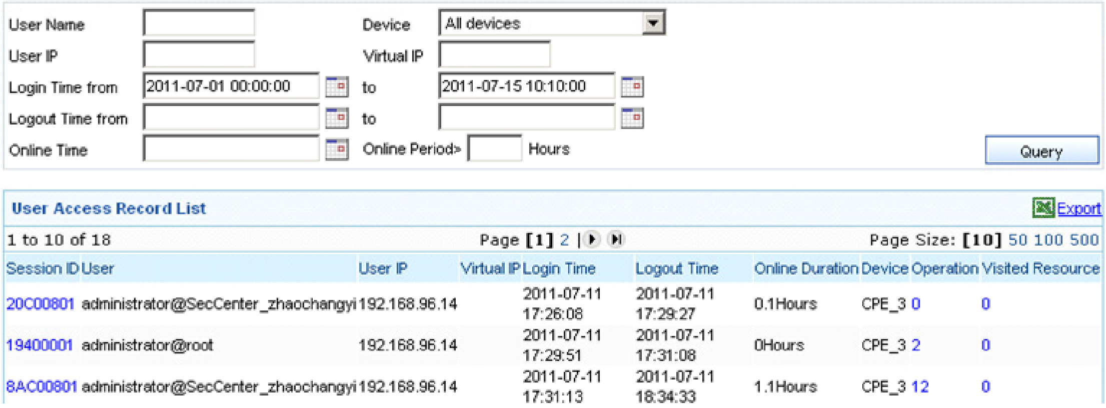
User access records auditing

The user access records display details about the access information of SSL VPN users, such as the username, IP address of the SSL VPN user, virtual IP address, login time, logout time, online duration, IP address of the firewall device, number of user operations, and number of accessed resources. It also supports flexible user access records query.

Configuration guide

From the navigation tree of the SSL VPN auditing component, select **User Access Records** under **Log Auditing** to enter the user access records page, as shown in Figure 102.

Figure 102 User access record auditing



User Name		Device	All devices
User IP		Virtual IP	
Login Time from	2011-07-01 00:00:00	to	2011-07-15 10:10:00
Logout Time from		to	
Online Time		Online Period>	Hours

User Access Record List

1 to 10 of 18 Page [1] 2 | Page Size: [10] 50 100 500

Session ID	User	User IP	Virtual IP	Login Time	Logout Time	Online Duration	Device	Operation	Visited Resource
20C00801	administrator@SecCenter_zhaochangyi	192.168.96.14		2011-07-11 17:26:08	2011-07-11 17:29:27	0.1Hours	CPE_3	0	0
19400001	administrator@root	192.168.96.14		2011-07-11 17:29:51	2011-07-11 17:31:08	0Hours	CPE_3	2	0
8AC00801	administrator@SecCenter_zhaochangyi	192.168.96.14		2011-07-11 17:31:13	2011-07-11 18:34:33	1.1Hours	CPE_3	12	0

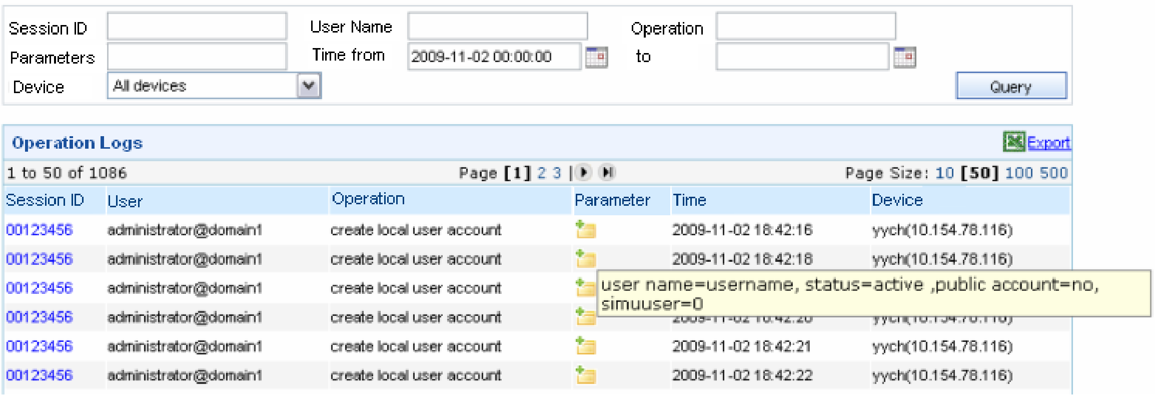
Operation log auditing

The operation log auditing allows you to audit operations of SSL VPN system operators based on the information of username, executed operation and related parameters, operation time, and IP address of the firewall device. It also supports flexible operation log query.

Configuration guide

From the navigation tree of the SSL VPN auditing component, select **Operation Log Auditing** under **Log Auditing** to enter the operation log auditing page, as shown in Figure 103.

Figure 103 Operation log auditing



Session ID		User Name		Operation	
Parameters		Time from	2009-11-02 00:00:00	to	
Device	All devices				

Operation Logs

1 to 50 of 1086 Page [1] 2 3 Page Size: 10 [50] 100 500

Session ID	User	Operation	Parameter	Time	Device
00123456	administrator@domain1	create local user account		2009-11-02 18:42:16	yych(10.154.78.116)
00123456	administrator@domain1	create local user account		2009-11-02 18:42:18	yych(10.154.78.116)
00123456	administrator@domain1	create local user account			
00123456	administrator@domain1	create local user account		2009-11-02 18:42:20	yych(10.154.78.116)
00123456	administrator@domain1	create local user account		2009-11-02 18:42:21	yych(10.154.78.116)
00123456	administrator@domain1	create local user account		2009-11-02 18:42:22	yych(10.154.78.116)

user name=username, status=active ,public account=no, simuuser=0

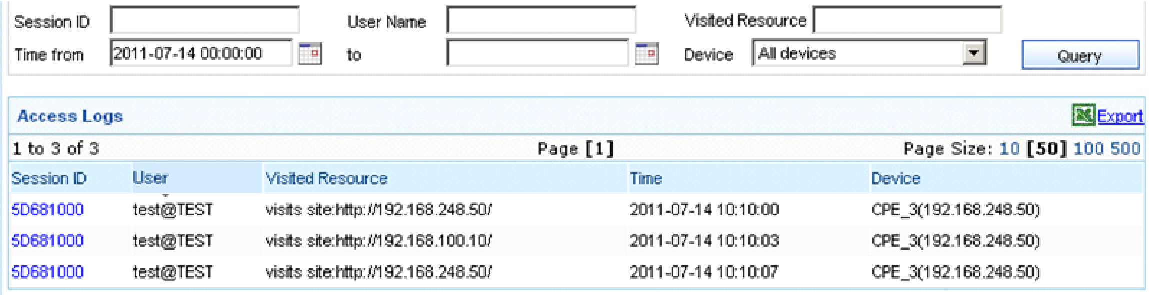
Resource access auditing

The resource access auditing allows you to audit operations of SSL VPN users based on the information of username, operations related to resource access, operation time, and IP address of the firewall device. It also supports flexible operation log query.

Configuration guide

From the navigation tree of the SSL VPN auditing component, select **Visited Resource Auditing** under **Log Auditing** to enter the page for auditing resource access logs, as shown in Figure 104.

Figure 104 Resource access log auditing



Session ID		User Name		Visited Resource	
Time from	2011-07-14 00:00:00	to		Device	All devices

Access Logs

1 to 3 of 3 Page [1] Page Size: 10 [50] 100 500

Session ID	User	Visited Resource	Time	Device
5D681000	test@TEST	visits site:http://192.168.248.50/	2011-07-14 10:10:00	CPE_3(192.168.248.50)
5D681000	test@TEST	visits site:http://192.168.100.10/	2011-07-14 10:10:03	CPE_3(192.168.248.50)
5D681000	test@TEST	visits site:http://192.168.248.50/	2011-07-14 10:10:07	CPE_3(192.168.248.50)

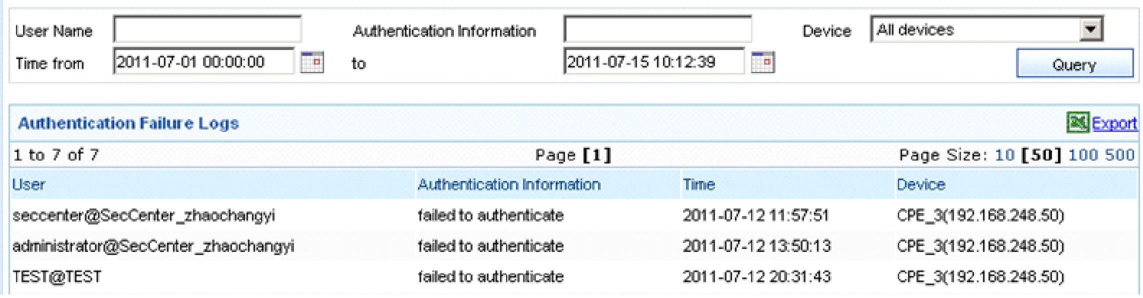
Authentication failure auditing

The authentication failure auditing allows you to audit authentication failure logs. Each log provides the username, reason for the authentication failure, authentication time, and IP address of the firewall device. It also supports flexible operation log query.

Configuration guide

From the navigation tree of the SSL VPN auditing component, select **Authentication Failure Auditing** under **Log Auditing** to enter the page for auditing authentication failures, as shown in Figure 105.

Figure 105 Authentication failure auditing



User	Authentication Information	Time	Device
seccenter@SecCenter_zhaochangyi	failed to authenticate	2011-07-12 11:57:51	CPE_3(192.168.248.50)
administrator@SecCenter_zhaochangyi	failed to authenticate	2011-07-12 13:50:13	CPE_3(192.168.248.50)
TEST@TEST	failed to authenticate	2011-07-12 20:31:43	CPE_3(192.168.248.50)

Configuration example 1

Network requirements

The HP A-IMC Firewall Manager works with HP firewall devices. The Firewall Manager collects attack events and logs sent by the firewall devices, processes and analyzes the collected data, and presents the information to the Firewall Manager operators.

You need to ensure that there is a reachable route between the Firewall Manager server and each managed HP firewall device.

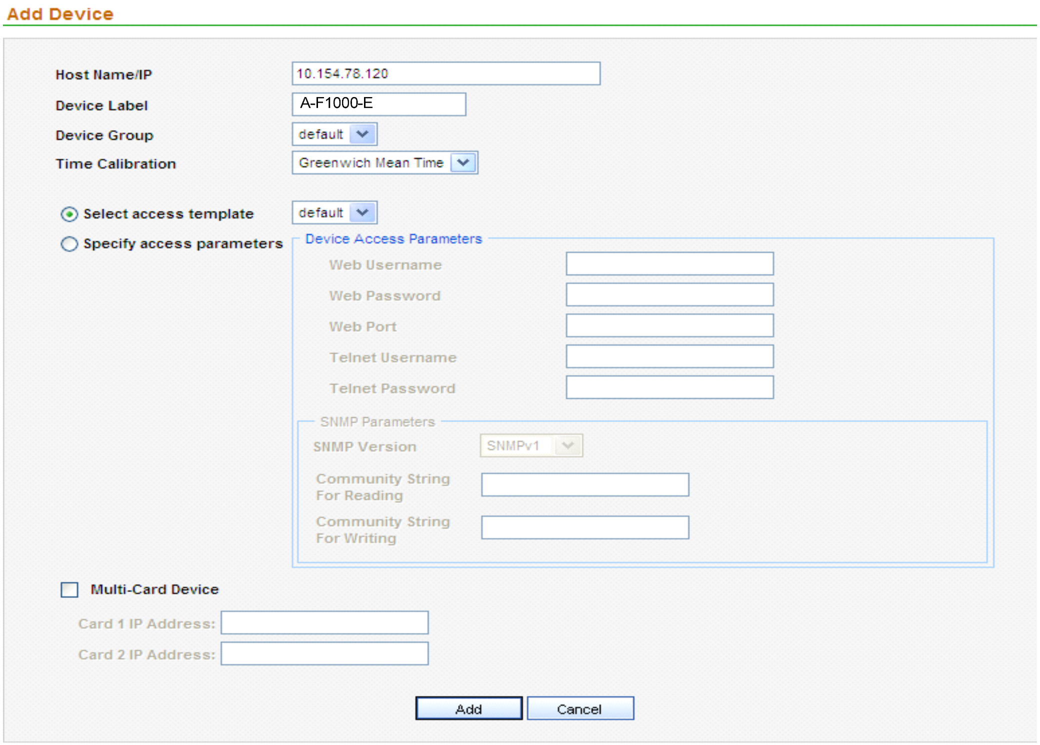
Configuration procedure

Adding devices to the firewall manager

Adding devices to HP Firewall Manager is the prerequisites to other operations, such as querying device information. This section describes how to add devices to the HP Firewall Manager:

1. Select the **System Management** component and then select **Device List** under **Device Management** from the navigation tree to enter the device management page. Click **Add** to enter the page for adding a device, as shown in Figure 106. Generally, you can just input the IP address and label (a string for identifying a device) of a device and leave other fields with the default settings.

Figure 106 Add a device to the system management component



Add Device

Host Name/IP: 10.154.78.120
Device Label: A-F1000-E
Device Group: default
Time Calibration: Greenwich Mean Time

● Select access template: default
○ Specify access parameters

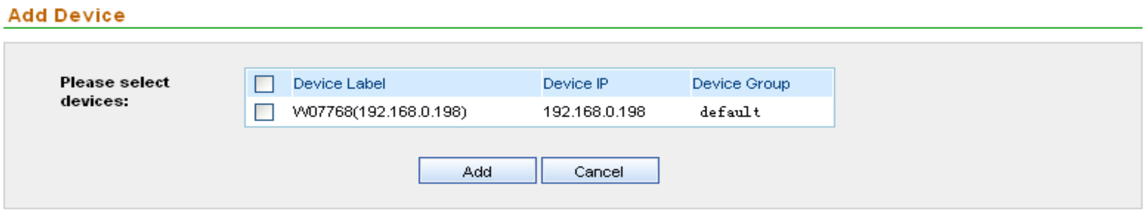
Device Access Parameters
Web Username:
Web Password:
Web Port:
Telnet Username:
Telnet Password:

SNMP Parameters
SNMP Version: SNMPv1
Community String For Reading:
Community String For Writing:

□ Multi-Card Device
Card 1 IP Address:
Card 2 IP Address:

2. Select the **Firewall Management** component, and then select **Device Management** under **Device Management** from the navigation tree to enter the device management page. Click **Add** to enter the page for adding devices to the firewall management component, as shown in Figure 107.

Figure 107 Add a device to the firewall management component



Add Device

Please select devices:

□	Device Label	Device IP	Device Group
□	W07768(192.168.0.198)	192.168.0.198	default

After you configure the devices and add the firewall devices to the HP A-IMC Firewall Manager, the Firewall Manager system is configured basically and ready for service operations.

△ CAUTION:

For devices that Firewall Manager has discovered automatically, you do not need to add them manually.

3. On the web interface of each firewall device, set the IP address of the syslog server in the notify action to that of the Firewall Manager server, and port number to 30514.

△ CAUTION:

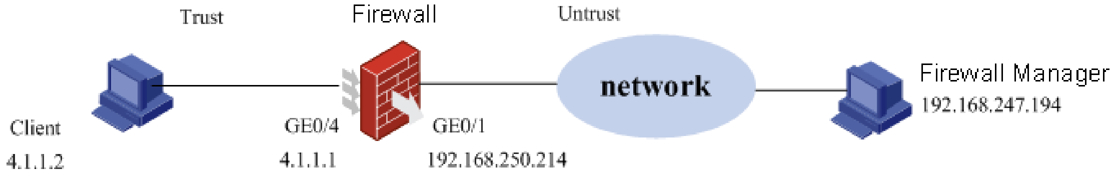
The A-IMC Firewall Manager uses port 30514 to receive syslogs.

Configuration example 2

Network requirements

The FW device connects the internal network 4.1.1.0/24 through GigabitEthernet 0/4 and connects the external network through GigabitEthernet 0/1. Configure the FW device to send logs to the syslog server with IP address 192.168.96.15 in the external network.

Figure 108 Network diagram for configuring FW and Firewall Manager



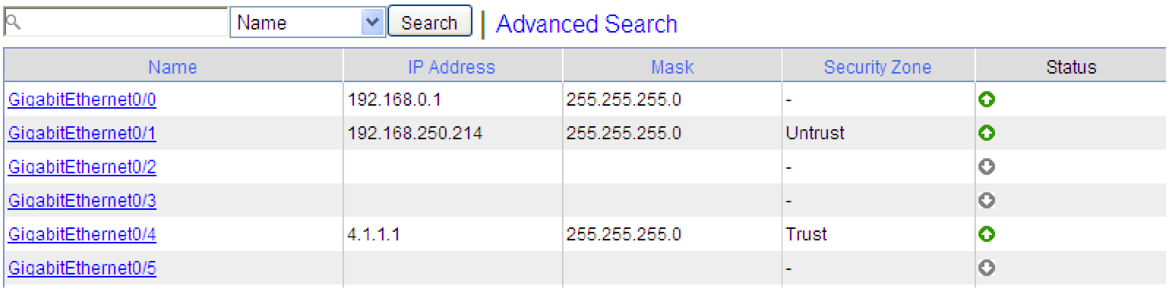
Configuration procedures

Configuring the firewall device

1. Configure interfaces

Select **Device Management > Interface**, assign the IP address 192.168.250.214/24 to GigabitEthernet 0/1, and add the interface to zone Untrust. Assign the IP address 4.1.1.1/24 to GigabitEthernet 0/4, and add the interface to zone Trust.

Figure 109 Configure interfaces

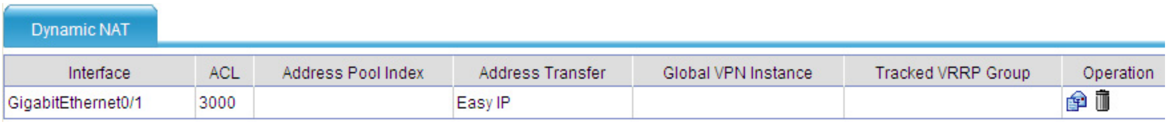


Name	IP Address	Mask	Security Zone	Status
GigabitEthernet0/0	192.168.0.1	255.255.255.0	-	●
GigabitEthernet0/1	192.168.250.214	255.255.255.0	Untrust	●
GigabitEthernet0/2			-	○
GigabitEthernet0/3			-	○
GigabitEthernet0/4	4.1.1.1	255.255.255.0	Trust	●
GigabitEthernet0/5			-	○

2. Configure NAT

Select **Firewall > NAT Policy > Dynamic NAT,** configure dynamic NAT on GigabitEthernet 0/1, referencing ACL 3000 and configuring Easy IP as the address translation mode.

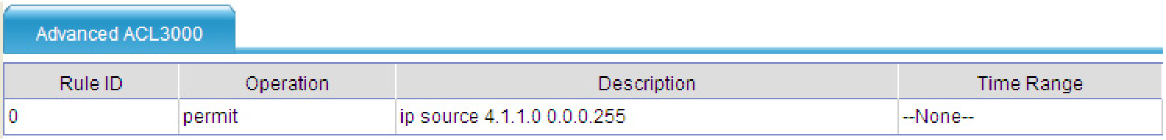
Figure 110 Configure dynamic NAT



Interface	ACL	Address Pool Index	Address Transfer	Global VPN Instance	Tracked VRRP Group	Operation
GigabitEthernet0/1	3000		Easy IP			✎ 🗑

Select **Firewall** > **ACL**, configure rules for ACL 3000 to permit packets sourced from 4.1.1.0/24.

Figure 111 Configure ACL 3000



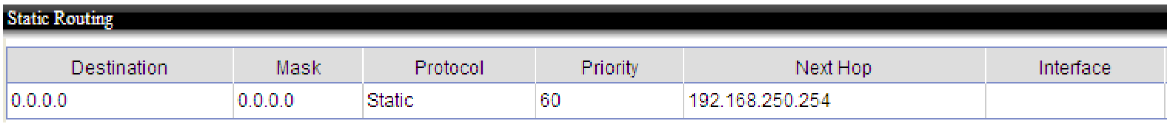
Advanced ACL3000

Rule ID	Operation	Description	Time Range
0	permit	ip source 4.1.1.0 0.0.0.255	--None--

3. Configure a static route

Select **Network** > **Routing Management** > **Static Routing**, add a default static route with the next hop being 192.168.250.254, which is the IP address of the gateway for accessing the internet.

Figure 112 Configure a default static route



Static Routing

Destination	Mask	Protocol	Priority	Next Hop	Interface
0.0.0.0	0.0.0.0	Static	60	192.168.250.254	

4. Configure SNMP on the FW device

To get connected with Firewall Manager, you should first enable the SNMP function of all versions. Create a community with the name of **public**, allowing read-only access right using this community name. Create a community with the name of **private**, allowing write operations using the community name.

Enter the following commands in the CLI.

```
[A-F1000-E] snmp-agent sys-info version all
[A-F1000-E] snmp-agent community read public
[A-F1000-E] snmp-agent community write private
```

Configuring the Firewall Manager

1. Install the Firewall Manager

Install the Firewall Manager software in the host 192.168.247.194, visit http://192.168.247.194, then you can log in to the Firewall Manager management webpage.

The default username is admin, and password is admin1.

2. Register the license

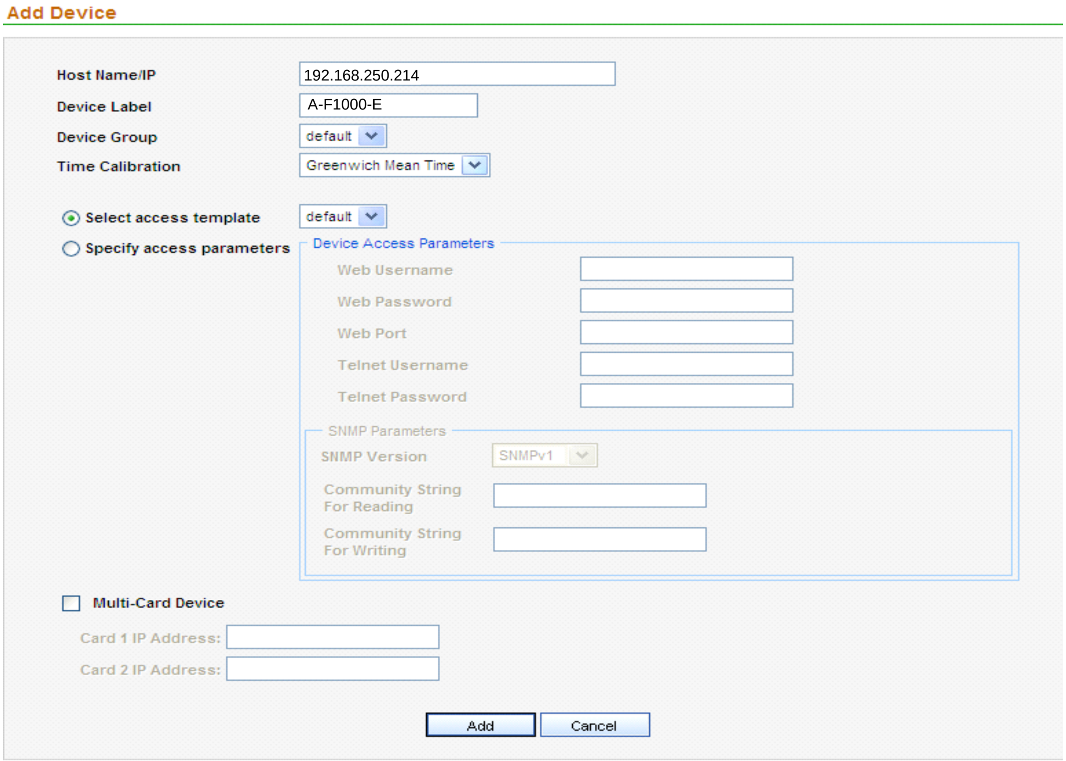
Select the **System Management** tab to enter the system management configuration page. Then from the navigation tree, select **License Registration** under **License Management** to enter the license registration page. Select the license file and then click **Apply** to complete registration.

3. Add the FW device to the Firewall Manager

Add the FW device to the Firewall Manager system so that the Firewall Manager system can receive the syslog packets from the A-F1000-E device.

Select the **System Management** tab to enter the system management configuration page. Then from the navigation tree, select **Device List** under **Device Management** to enter the device management page. Then, click **Add** to enter the page for adding a device. Type the IP address of GigabitEthernet 0/1 of FW as the host IP address. Specify the device label. If the A-F1000-E system time zone is UTC, select **Greenwich Mean Time** for the time calibration. Leave the default settings for other parameters.

Figure 113 Add the FW device to the Firewall Manager



Add Device

Host Name/IP	192.168.250.214
Device Label	A-F1000-E
Device Group	default
Time Calibration	Greenwich Mean Time

● Select access template: default

○ Specify access parameters

Device Access Parameters

Web Username	
Web Password	
Web Port	
Telnet Username	
Telnet Password	

SNMP Parameters

SNMP Version	SNMPv1
Community String For Reading	
Community String For Writing	

□ Multi-Card Device

Card 1 IP Address:	
Card 2 IP Address:	

Configuring intrusion detection in firewall and sending logs to Firewall Manager

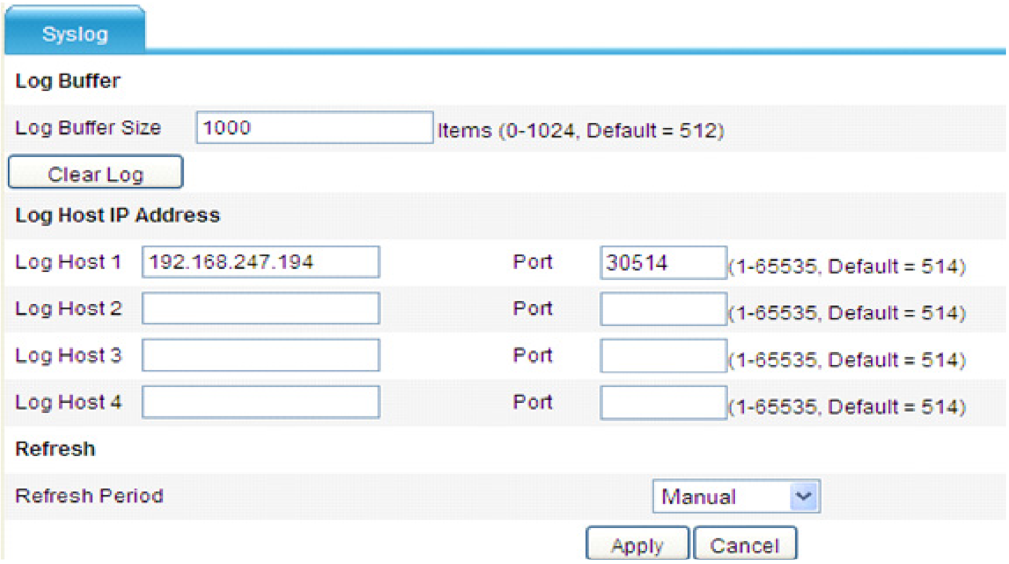
Enable logging and send logs to Firewall Manager

The log management feature enables you to store the system messages or logs generated by actions such as packet filtering to the log buffer or send them to the log hosts.

1. Configure a log host

Select **Log Report** > **Syslog** from the navigation tree, set the log buffer size and configure the Firewall Manager host ip address as the log host ip address.

Figure 114 Configure a log host



Syslog

Log Buffer

Log Buffer Size: 1000 Items (0-1024, Default = 512)

Clear Log

Log Host IP Address

Log Host 1	192.168.247.194	Port	30514	(1-65535, Default = 514)
Log Host 2		Port		(1-65535, Default = 514)
Log Host 3		Port		(1-65535, Default = 514)
Log Host 4		Port		(1-65535, Default = 514)

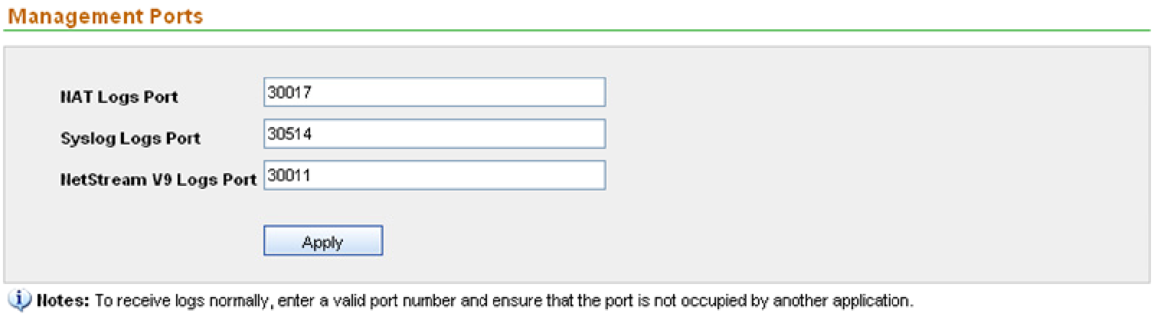
Refresh

Refresh Period: Manual

Apply Cancel

The port number should be in accordance with the management port number set in Firewall Manager, which can be seen in **System Management** > **System Config > Management Ports**

Figure 115 Management Ports



Management Ports

NAT Logs Port: 30017

Syslog Logs Port: 30514

NetStream V9 Logs Port: 30011

Apply

Notes: To receive logs normally, enter a valid port number and ensure that the port is not occupied by another application.

2. Configure User Log

Flow logging records users' access information to the external network. The device classifies and calculates flows through the 5-tuple information, which includes source IP address, destination IP address, source port, destination port, and protocol number, and generates user flow logs.

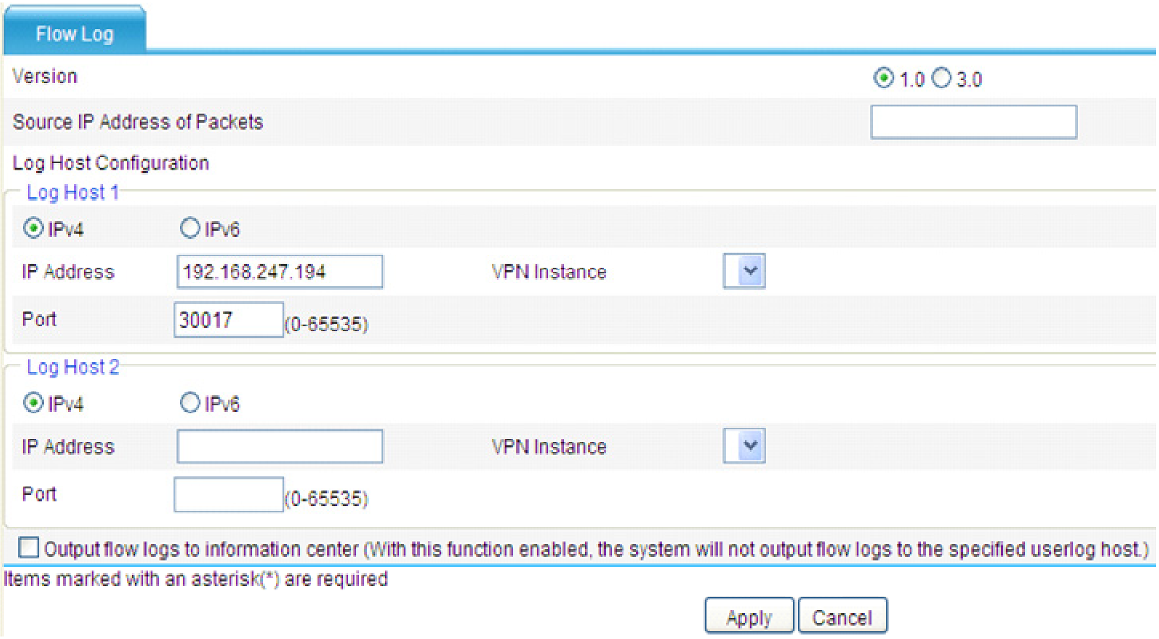
Flow logs can be output in the following two formats, and you can select either one.

- Output to the specified userlog log host in UDP packets in binary format.
- Output to the information center of the device in the format of syslog, and it can be displayed as other syslogs in **Log Report > Report** and can be sent to a syslog server too.

In this example, we choose to send flow log to a log host.

Select **Log Report** > **Userlog** from the navigation tree to enter the page as below. Configure the Firewall Manager host ip address as the log host ip address and port number 30017.

Figure 116 Userlog


Flow Log

Version ● 1.0 ○ 3.0

Source IP Address of Packets

Log Host Configuration

Log Host 1

● IPv4 ○ IPv6

IP Address: 192.168.247.194 VPN Instance

Port: 30017 (0-65535)

Log Host 2

● IPv4 ○ IPv6

IP Address VPN Instance

Port (0-65535)

□ Output flow logs to information center (With this function enabled, the system will not output flow logs to the specified userlog host.)

Items marked with an asterisk(*) are required

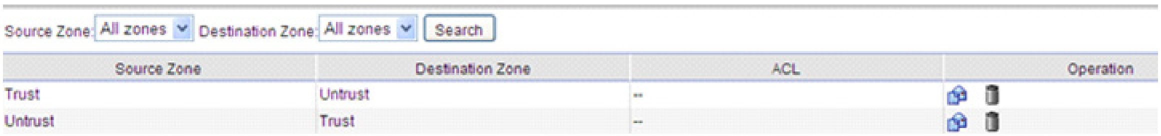
NOTE:

At present, flow logs refer to session logs only. To generate flow logs, you need to configure session logging according to the following illustration.

3. Configure a session logging policy

Select **Log Report** > **Session Log** > **Log Policy** from the navigation tree, then click **Add** to create policies as below.

Figure 117 Log Policy


Source Zone: All zones Destination Zone: All zones

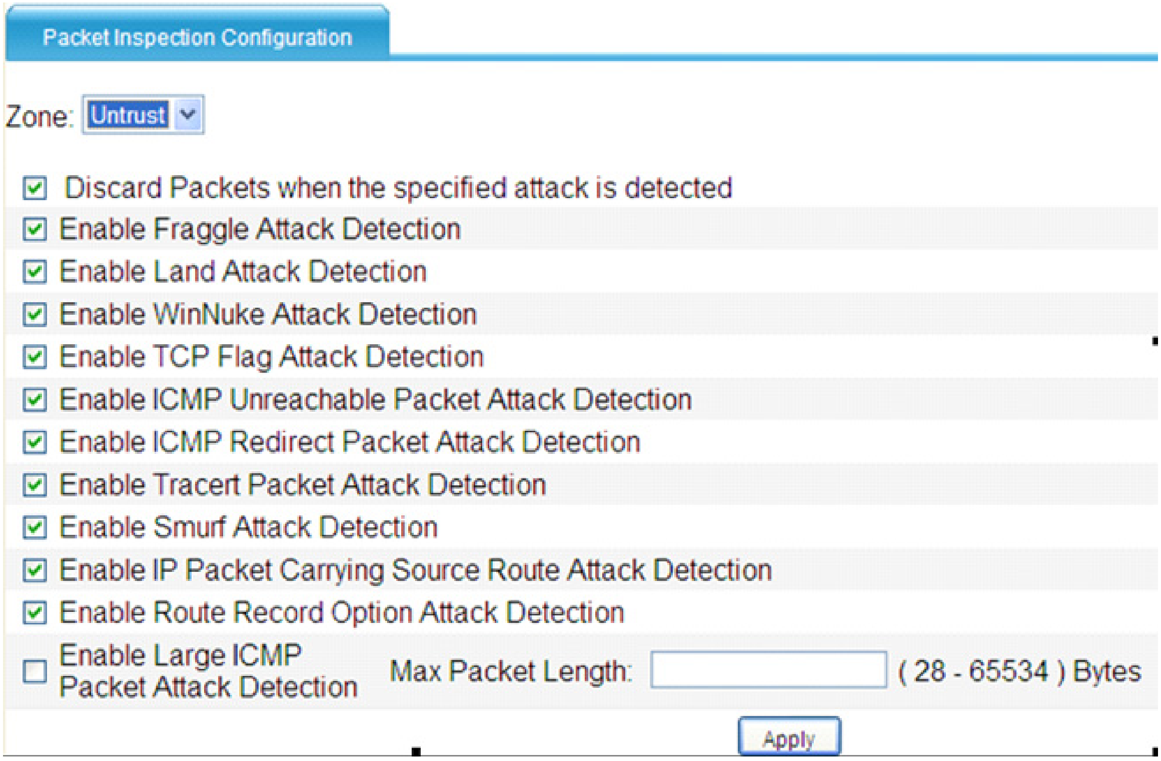
Source Zone	Destination Zone	ACL	Operation
Trust	Untrust	--	
Untrust	Trust	--	

Configuring intrusion detection

Select **Intrusion Detection** from the navigation tree, enable packet inspection, enable scanning detections, blacklist and URPF check.

As an example, the threshold is set quite low. In real environment, please set the proper threshold according to the requirements.

- Packet inspection



Zone: Untrust

☑ Discard Packets when the specified attack is detected

☑ Enable Fraggle Attack Detection

☑ Enable Land Attack Detection

☑ Enable WinNuke Attack Detection

☑ Enable TCP Flag Attack Detection

☑ Enable ICMP Unreachable Packet Attack Detection

☑ Enable ICMP Redirect Packet Attack Detection

☑ Enable Tracert Packet Attack Detection

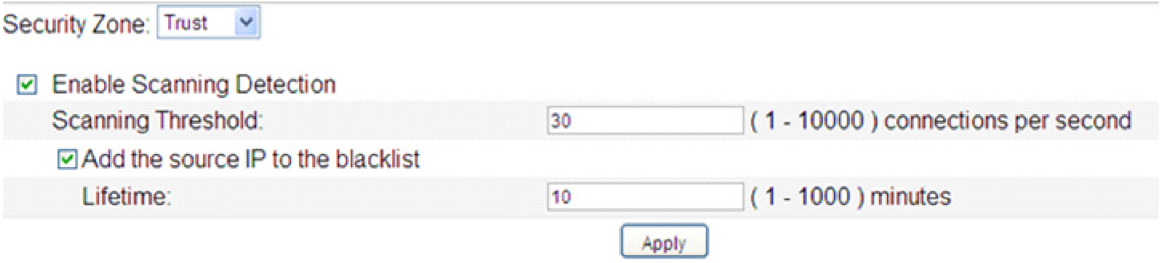
☑ Enable Smurf Attack Detection

☑ Enable IP Packet Carrying Source Route Attack Detection

☑ Enable Route Record Option Attack Detection

□ Enable Large ICMP Packet Attack Detection Max Packet Length: (28 - 65534) Bytes

- Scanning detection



Security Zone: Trust

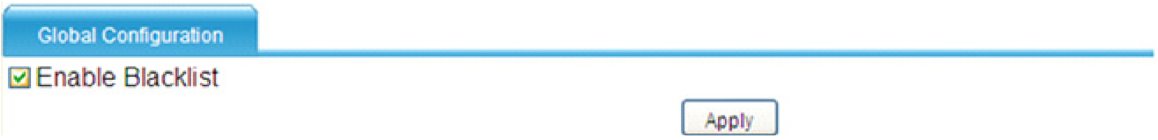
☑ Enable Scanning Detection

Scanning Threshold: 30 (1 - 10000) connections per second

☑ Add the source IP to the blacklist

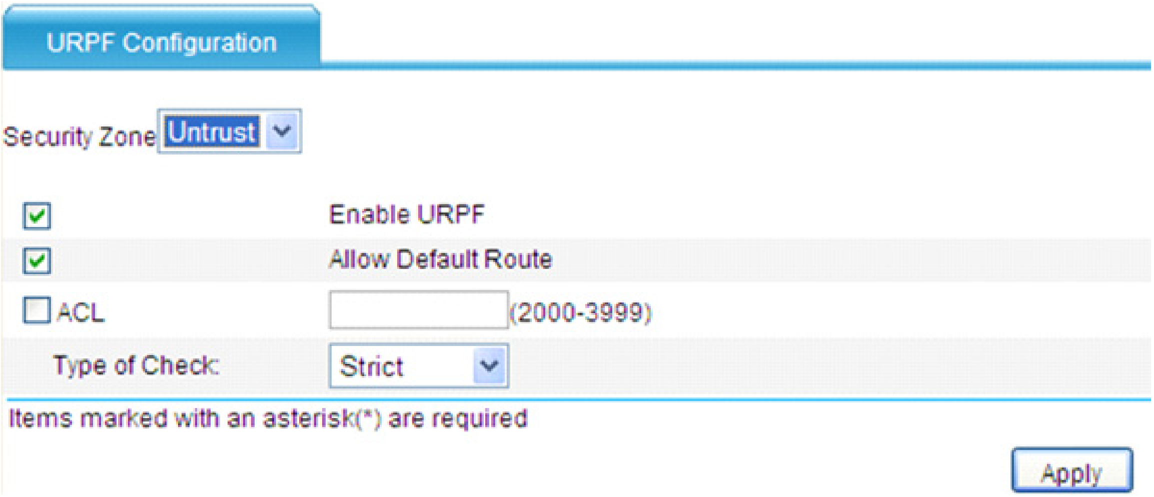
Lifetime: 10 (1 - 1000) minutes

- Blacklist



☑ Enable Blacklist

- URPF check



URPF Configuration

Security Zone: Untrust

☑ Enable URPF

☑ Allow Default Route

□ ACL (2000-3999)

Type of Check: Strict

Items marked with an asterisk(*) are required

NOTE:

After configuring all the policies, please remember to click **Apply** to make them take effect.

Verification

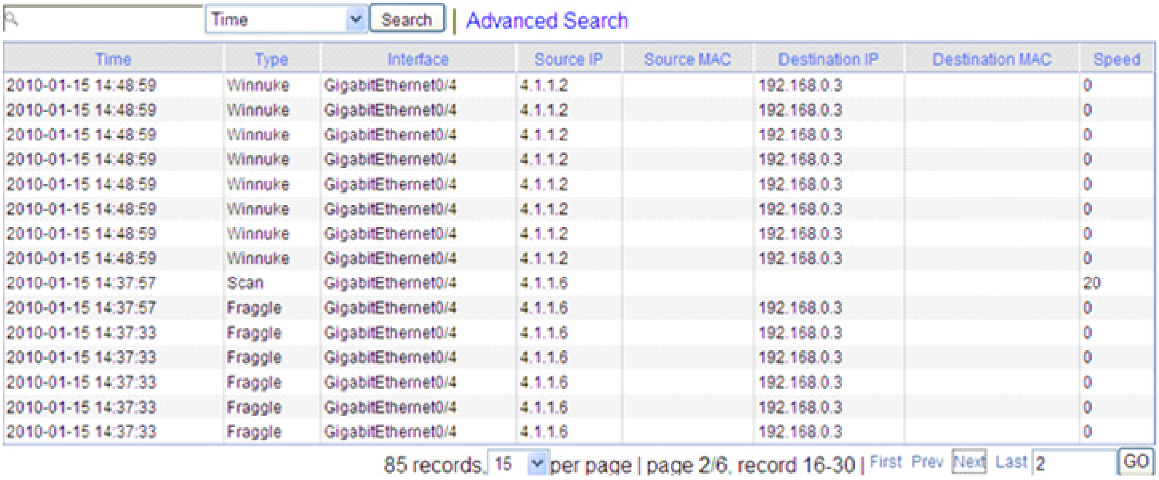
Firewall logs and Firewall Manager analysis

Displaying log report on the firewall webpage

The internal PC send some attack packets to the external PC, or from outside to inside, such as land attack, Winnuke attack, the firewall will detect them and log.

Select **Log Report** > **Report** to display the system log, connection limit log, attack prevention log, blacklist log, interzone policy log and userlog.

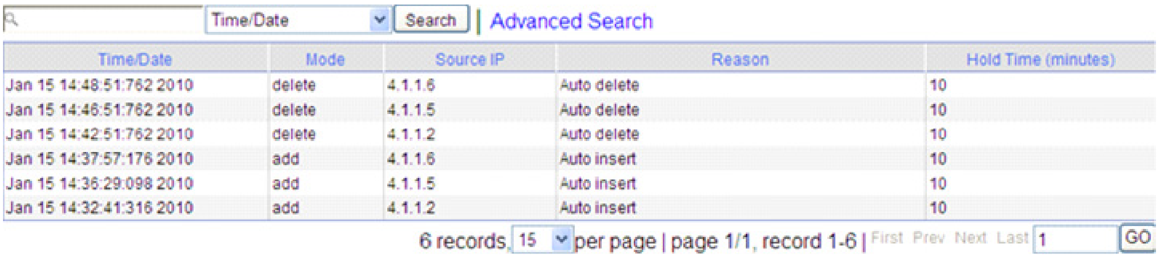
- Attack prevention Log



Time	Type	Interface	Source IP	Source MAC	Destination IP	Destination MAC	Speed
2010-01-15 14:48:59	Winnuke	GigabitEthernet0/4	4.1.1.2		192.168.0.3		0
2010-01-15 14:48:59	Winnuke	GigabitEthernet0/4	4.1.1.2		192.168.0.3		0
2010-01-15 14:48:59	Winnuke	GigabitEthernet0/4	4.1.1.2		192.168.0.3		0
2010-01-15 14:48:59	Winnuke	GigabitEthernet0/4	4.1.1.2		192.168.0.3		0
2010-01-15 14:48:59	Winnuke	GigabitEthernet0/4	4.1.1.2		192.168.0.3		0
2010-01-15 14:48:59	Winnuke	GigabitEthernet0/4	4.1.1.2		192.168.0.3		0
2010-01-15 14:48:59	Winnuke	GigabitEthernet0/4	4.1.1.2		192.168.0.3		0
2010-01-15 14:48:59	Winnuke	GigabitEthernet0/4	4.1.1.2		192.168.0.3		0
2010-01-15 14:37:57	Scan	GigabitEthernet0/4	4.1.1.6				20
2010-01-15 14:37:57	Fraggle	GigabitEthernet0/4	4.1.1.6		192.168.0.3		0
2010-01-15 14:37:33	Fraggle	GigabitEthernet0/4	4.1.1.6		192.168.0.3		0
2010-01-15 14:37:33	Fraggle	GigabitEthernet0/4	4.1.1.6		192.168.0.3		0
2010-01-15 14:37:33	Fraggle	GigabitEthernet0/4	4.1.1.6		192.168.0.3		0
2010-01-15 14:37:33	Fraggle	GigabitEthernet0/4	4.1.1.6		192.168.0.3		0
2010-01-15 14:37:33	Fraggle	GigabitEthernet0/4	4.1.1.6		192.168.0.3		0

85 records, 15 per page | page 2/6, record 16-30 |

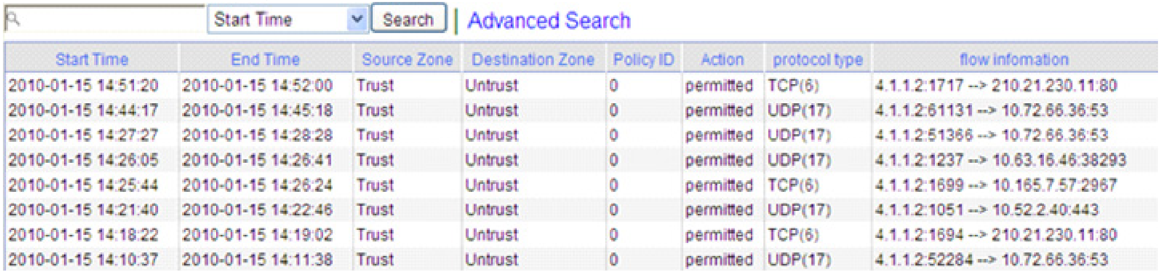
- Blacklist Log:



Time/Date
Search
Advanced Search
6 records, 15 per page | page 1/1, record 1-6 | First Prev Next Last 1 GO

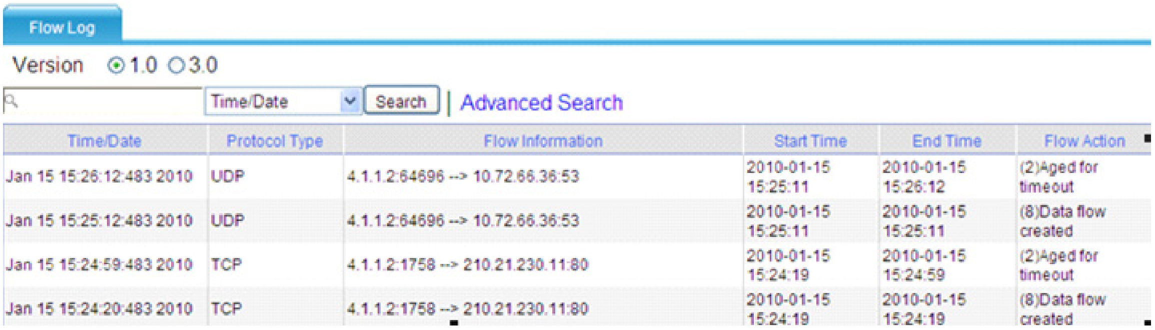
Time/Date	Mode	Source IP	Reason	Hold Time (minutes)
Jan 15 14:48:51:762 2010	delete	4.1.1.6	Auto delete	10
Jan 15 14:46:51:762 2010	delete	4.1.1.5	Auto delete	10
Jan 15 14:42:51:762 2010	delete	4.1.1.2	Auto delete	10
Jan 15 14:37:57:176 2010	add	4.1.1.6	Auto insert	10
Jan 15 14:36:29:098 2010	add	4.1.1.5	Auto insert	10
Jan 15 14:32:41:316 2010	add	4.1.1.2	Auto insert	10

- Intrusion Policy Log



Start Time	End Time	Source Zone	Destination Zone	Policy ID	Action	protocol type	flow infomation
2010-01-15 14:51:20	2010-01-15 14:52:00	Trust	Untrust	0	permitted	TCP(6)	4.1.1.2:1717 --> 210.21.230.11:80
2010-01-15 14:44:17	2010-01-15 14:45:18	Trust	Untrust	0	permitted	UDP(17)	4.1.1.2:61131 --> 10.72.66.36:53
2010-01-15 14:27:27	2010-01-15 14:28:28	Trust	Untrust	0	permitted	UDP(17)	4.1.1.2:51366 --> 10.72.66.36:53
2010-01-15 14:26:05	2010-01-15 14:26:41	Trust	Untrust	0	permitted	UDP(17)	4.1.1.2:1237 --> 10.63.16.46:38293
2010-01-15 14:25:44	2010-01-15 14:26:24	Trust	Untrust	0	permitted	TCP(6)	4.1.1.2:1699 --> 10.165.7.57:2967
2010-01-15 14:21:40	2010-01-15 14:22:46	Trust	Untrust	0	permitted	UDP(17)	4.1.1.2:1051 --> 10.52.2.40:443
2010-01-15 14:18:22	2010-01-15 14:19:02	Trust	Untrust	0	permitted	TCP(6)	4.1.1.2:1694 --> 210.21.230.11:80
2010-01-15 14:10:37	2010-01-15 14:11:38	Trust	Untrust	0	permitted	UDP(17)	4.1.1.2:52284 --> 10.72.66.36:53

- User log

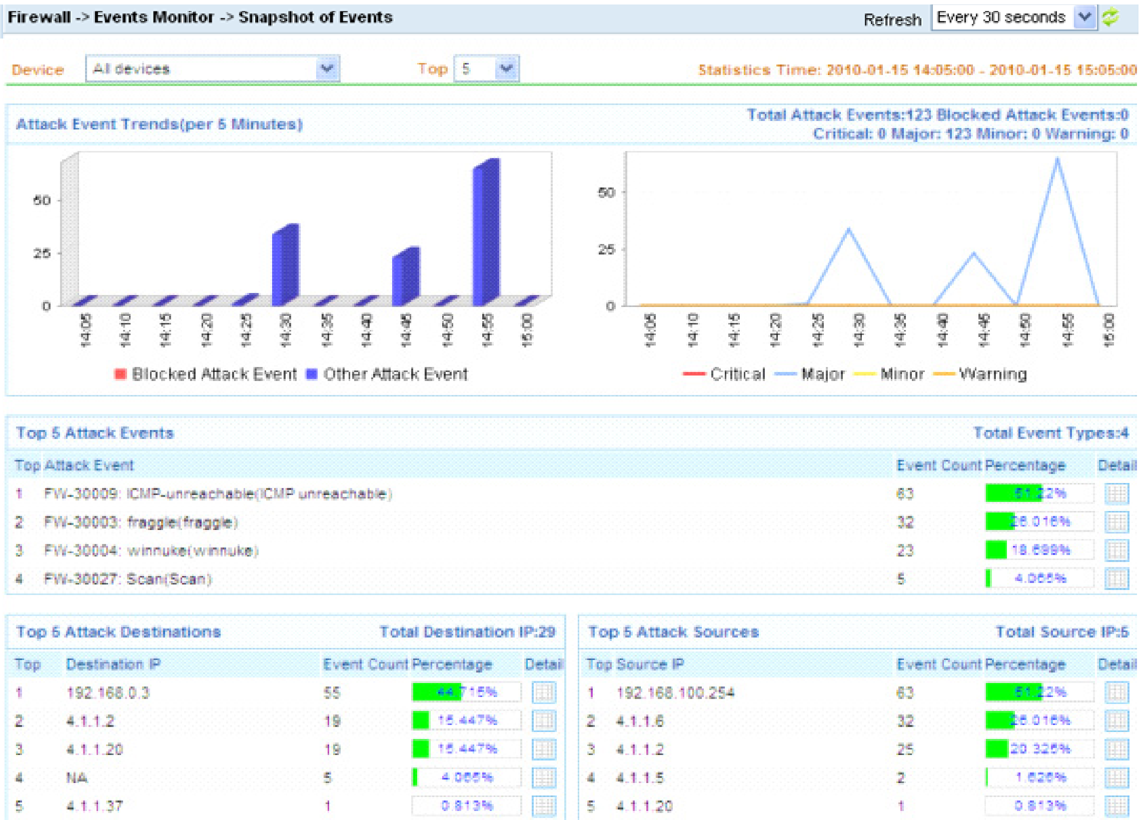


Time/Date	Protocol Type	Flow Information	Start Time	End Time	Flow Action
Jan 15 15:26:12:483 2010	UDP	4.1.1.2:64696 --> 10.72.66.36:53	2010-01-15 15:25:11	2010-01-15 15:26:12	(2)Aged for timeout
Jan 15 15:25:12:483 2010	UDP	4.1.1.2:64696 --> 10.72.66.36:53	2010-01-15 15:25:11	2010-01-15 15:25:11	(8)Data flow created
Jan 15 15:24:59:483 2010	TCP	4.1.1.2:1758 --> 210.21.230.11:80	2010-01-15 15:24:19	2010-01-15 15:24:59	(2)Aged for timeout
Jan 15 15:24:20:483 2010	TCP	4.1.1.2:1758 --> 210.21.230.11:80	2010-01-15 15:24:19	2010-01-15 15:24:19	(8)Data flow created

Displaying firewall management statistics on Firewall Manager

As we have configured the firewall to send logs to Firewall Manager, we can see the statistics and analysis in **Firewall** module on Firewall Manager webpage.

- Snapshot of Events happened in the firewall



Firewall -> Events Monitor -> Snapshot of Events Refresh Every 30 seconds

Device: All devices Top: 5 Statistics Time: 2010-01-15 14:05:00 - 2010-01-15 15:05:00

Attack Event Trends(per 5 Minutes)

Total Attack Events:123 Blocked Attack Events:0
Critical: 0 Major: 123 Minor: 0 Warning: 0

Top 5 Attack Events Total Event Types:4

Top	Attack Event	Event Count	Percentage	Detail
1	FW-30009: ICMP-unreachable(ICMP unreachable)	63	51.22%	
2	FW-30003: fraggle(fraggle)	32	26.016%	
3	FW-30004: winnuke(winnuke)	23	18.699%	
4	FW-30027: Scan(Scan)	5	4.065%	

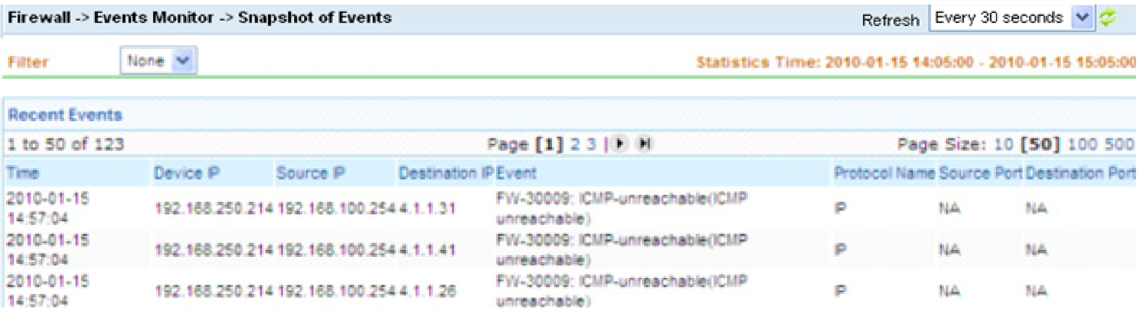
Top 5 Attack Destinations Total Destination IP:29

Top	Destination IP	Event Count	Percentage	Detail
1	192.168.0.3	55	44.715%	
2	4.1.1.2	19	15.447%	
3	4.1.1.20	19	15.447%	
4	NA	5	4.065%	
5	4.1.1.37	1	0.813%	

Top 5 Attack Sources Total Source IP:5

Top	Source IP	Event Count	Percentage	Detail
1	192.168.100.254	63	51.22%	
2	4.1.1.6	32	26.016%	
3	4.1.1.2	25	20.325%	
4	4.1.1.5	2	1.626%	
5	4.1.1.20	1	0.813%	

- Recent list



Firewall -> Events Monitor -> Snapshot of Events Refresh Every 30 seconds

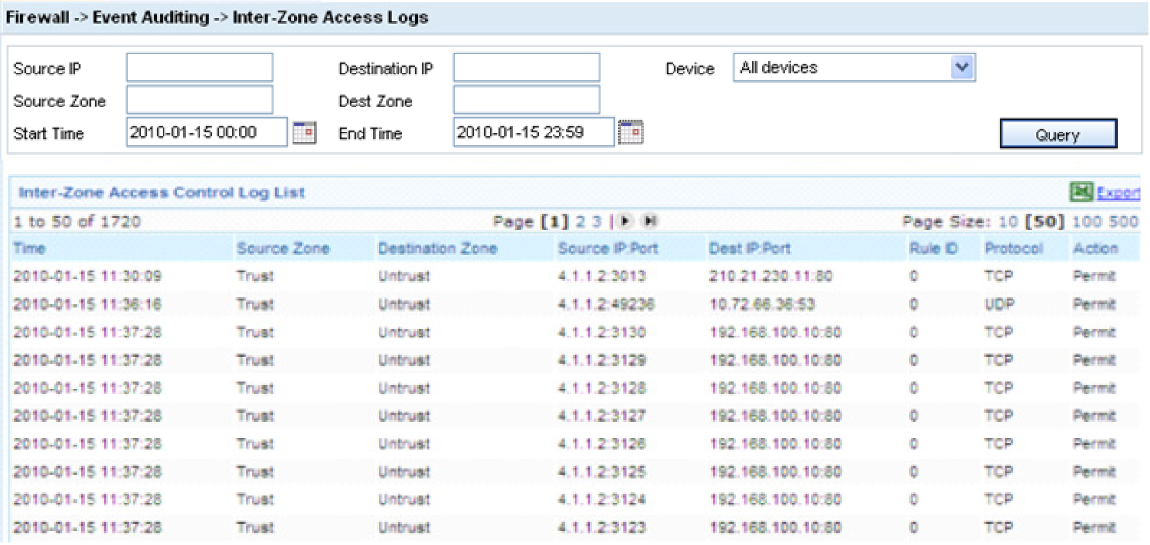
Filter: None Statistics Time: 2010-01-15 14:05:00 - 2010-01-15 15:05:00

Recent Events

1 to 50 of 123 Page [1] 2 3 | Page Size: 10 [50] 100 500

Time	Device IP	Source IP	Destination IP	Event	Protocol Name	Source Port	Destination Port
2010-01-15 14:57:04	192.168.250.214	192.168.100.254	4.1.1.31	FW-30009: ICMP-unreachable(ICMP unreachable)	IP	NA	NA
2010-01-15 14:57:04	192.168.250.214	192.168.100.254	4.1.1.41	FW-30009: ICMP-unreachable(ICMP unreachable)	IP	NA	NA
2010-01-15 14:57:04	192.168.250.214	192.168.100.254	4.1.1.26	FW-30009: ICMP-unreachable(ICMP unreachable)	IP	NA	NA

- Inter-zone access logs



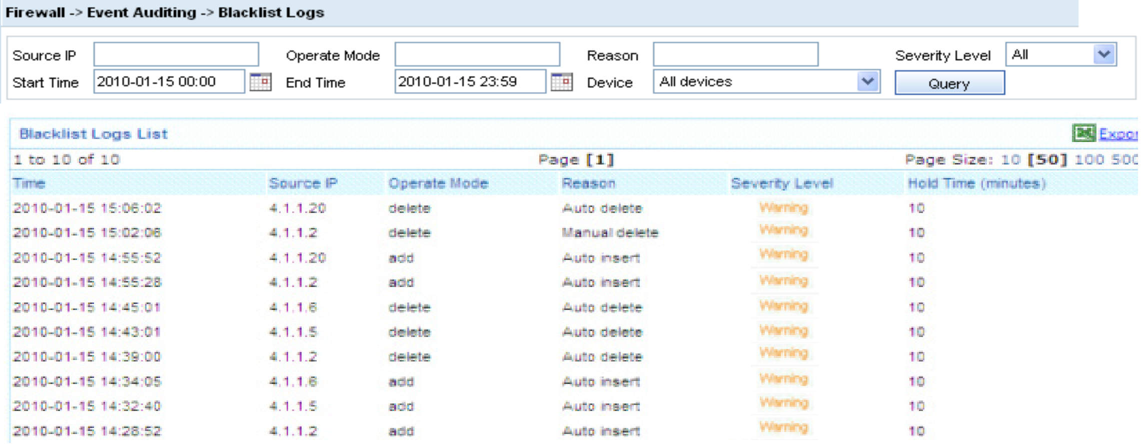
Firewall -> Event Auditing -> Inter-Zone Access Logs

Source IP		Destination IP		Device	All devices
Source Zone		Dest Zone			
Start Time	2010-01-15 00:00	End Time	2010-01-15 23:59		Query

Inter-Zone Access Control Log List
Export
1 to 50 of 1720
Page [1] 2 3
Page Size: 10 [50] 100 500

Time	Source Zone	Destination Zone	Source IP:Port	Dest IP:Port	Rule ID	Protocol	Action
2010-01-15 11:30:09	Trust	Untrust	4.1.1.2:3013	210.21.230.11:80	0	TCP	Permit
2010-01-15 11:36:16	Trust	Untrust	4.1.1.2:49236	10.72.66.36:53	0	UDP	Permit
2010-01-15 11:37:28	Trust	Untrust	4.1.1.2:3130	192.168.100.10:80	0	TCP	Permit
2010-01-15 11:37:28	Trust	Untrust	4.1.1.2:3129	192.168.100.10:80	0	TCP	Permit
2010-01-15 11:37:28	Trust	Untrust	4.1.1.2:3128	192.168.100.10:80	0	TCP	Permit
2010-01-15 11:37:28	Trust	Untrust	4.1.1.2:3127	192.168.100.10:80	0	TCP	Permit
2010-01-15 11:37:28	Trust	Untrust	4.1.1.2:3126	192.168.100.10:80	0	TCP	Permit
2010-01-15 11:37:28	Trust	Untrust	4.1.1.2:3125	192.168.100.10:80	0	TCP	Permit
2010-01-15 11:37:28	Trust	Untrust	4.1.1.2:3124	192.168.100.10:80	0	TCP	Permit
2010-01-15 11:37:28	Trust	Untrust	4.1.1.2:3123	192.168.100.10:80	0	TCP	Permit

- Blacklist logs

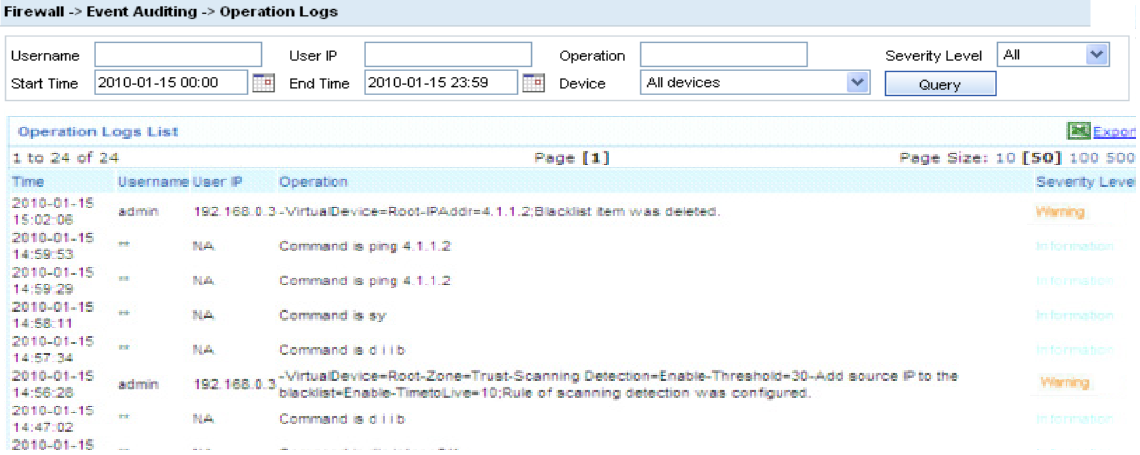


Firewall -> Event Auditing -> Blacklist Logs

Source IP		Operate Mode		Reason		Severity Level	All
Start Time	2010-01-15 00:00	End Time	2010-01-15 23:59	Device	All devices		Query

Time	Source IP	Operate Mode	Reason	Severity Level	Hold Time (minutes)
2010-01-15 15:06:02	4.1.1.20	delete	Auto delete	Warning	10
2010-01-15 15:02:06	4.1.1.2	delete	Manual delete	Warning	10
2010-01-15 14:55:52	4.1.1.20	add	Auto insert	Warning	10
2010-01-15 14:55:28	4.1.1.2	add	Auto insert	Warning	10
2010-01-15 14:45:01	4.1.1.6	delete	Auto delete	Warning	10
2010-01-15 14:43:01	4.1.1.5	delete	Auto delete	Warning	10
2010-01-15 14:39:00	4.1.1.2	delete	Auto delete	Warning	10
2010-01-15 14:34:05	4.1.1.6	add	Auto insert	Warning	10
2010-01-15 14:32:40	4.1.1.5	add	Auto insert	Warning	10
2010-01-15 14:28:52	4.1.1.2	add	Auto insert	Warning	10

- Operation Logs



Firewall -> Event Auditing -> Operation Logs

Username		User IP		Operation		Severity Level	All
Start Time	2010-01-15 00:00	End Time	2010-01-15 23:59	Device	All devices		Query

Time	Username	User IP	Operation	Severity Level
2010-01-15 15:02:06	admin	192.168.0.3	-VirtualDevice=Root-IPAddr=4.1.1.2;Blacklist item was deleted.	Warning
2010-01-15 14:59:53	**	NA	Command is ping 4.1.1.2	Information
2010-01-15 14:59:29	**	NA	Command is ping 4.1.1.2	Information
2010-01-15 14:58:11	**	NA	Command is sy	Information
2010-01-15 14:57:34	**	NA	Command is d i i b	Information
2010-01-15 14:56:28	admin	192.168.0.3	-VirtualDevice=Root-Zone=Trust-Scanning Detection=Enable-Threshold=30-Add source IP to the blacklist=Enable-TimetoLive=10;Rule of scanning detection was configured.	Warning
2010-01-15 14:47:02	**	NA	Command is d i i b	Information
2010-01-15				

Support and other resources

Contacting HP

For worldwide technical support information, see the HP support website:

http://www.hp.com/support

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website:

http://www.hp.com/go/wwalerts

After registering, you will receive email notification of product enhancements, new driver versions, firmware updates, and other product resources.

Related information

Documents

To find related documents, browse to the Manuals page of the HP Business Support Center website:

http://www.hp.com/support/manuals

- For related documentation, navigate to the Networking section, and select a networking category.
- For a complete list of acronyms and their definitions, see *HP A-Series Acronyms.*

Websites

- HP.com http://www.hp.com
- HP Networking http://www.hp.com/go/networking
- HP manuals http://www.hp.com/support/manuals
- HP download drivers and software http://www.hp.com/support/downloads
- HP software depot http://www.software.hp.com

Conventions

This section describes the conventions used in this documentation set.

Command conventions

Convention	Description
Boldface	**Bold** text represents commands and keywords that you enter literally as shown.
Italic	*Italic* text represents arguments that you replace with actual values.
[ ]	Square brackets enclose syntax choices (keywords or arguments) that are optional.
{ x | y | ... }	Braces enclose a set of required syntax choices separated by vertical bars, from which you select one.
[x | y | ...]	Square brackets enclose a set of optional syntax choices separated by vertical bars, from which you select one or none.
{ x | y | ... } *	Asterisk-marked braces enclose a set of required syntax choices separated by vertical bars, from which you select at least one.
[x | y | ...] *	Asterisk-marked square brackets enclose optional syntax choices separated by vertical bars, from which you select one choice, multiple choices, or none.
&<1-n>	The argument or keyword and argument combination before the ampersand (&) sign can be entered 1 to n times.
#	A line that starts with a pound (#) sign is comments.

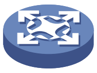
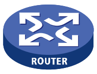
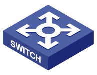
GUI conventions

Convention	Description
Boldface	Window names, button names, field names, and menu items are in bold text. For example, the **New User** window appears; click **OK**.
>	Multi-level menus are separated by angle brackets. For example, **File** > **Create** > **Folder**.

Symbols

Convention	Description
⚠ WARNING	An alert that calls attention to important information that if not understood or followed can result in personal injury.
△ CAUTION	An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.
ⓘ IMPORTANT	An alert that calls attention to essential information.
NOTE	An alert that contains additional or supplementary information.
💡 TIP	An alert that provides helpful information.

Network topology icons

	Represents a generic network device, such as a router, switch, or firewall.
	Represents a routing-capable device, such as a router or Layer 3 switch.
	Represents a generic switch, such as a Layer 2 or Layer 3 switch, or a router that supports Layer 2 forwarding and other Layer 2 features.

Port numbering in examples

The port numbers in this document are for illustration only and might be unavailable on your device.

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